THE ILLUSTRATED LONDON ALMANACK

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PREFACE.

The Second Illustrated London Almanack is now offered to the public; and it is hoped that it will not be found less worthy of a favourable reception, than that which has preceded it.

The First Page of each Month is headed by an Allegorical Design, and the remainder is devoted to Calendarial Information; we proceed to explain, where necessary, the columns in this page.

SUN AND MOON RISING AND SETTING, &c.

In calculating the Times of Sun Rising or Setting, the effect of refraction has been taken into account, by assuming that the mean horizontal refraction is 34′; and for the Moon a mean horizontal parallax of 57′ has also been included, so that the times are for the centre of each body appearing in the horizon.

The difference between the time of the Moon Rising or Setting, and the time the Moon Souths, represents the half of the time the Moon is above the horizon.

The Times of the Phases of the Moon are computed for the meridian of Greenwich. The times for any other meridian may be easily deduced by adding or subtracting the difference of longitude from Greenwich, according as the same is E. or W. of Greenwich.

EQUATION OF TIME.

The interval of time between the Sun being on the meridian of one day, and his being on the meridian of the next day, is not always the same, and, therefore, solar days are not equal in duration; about one half are a little more, and about one half are a little less than twenty-four hours. A clock regulated by the Sun would need frequent adjustment; to avoid this, an imaginary Sun is supposed to move, so that the interval of time between its consecutive passages over the meridian is always equal; such a time represents a mean solar day, and it is the average of all the apparent solar days in a year. The difference of time between the imaginary Sun and the true Sun passing the meridian, is called the "Equation of Time," the amount of which at noon every day is inserted. There are only four days in the year when the apparent and mean-time are the same, and the Equation of Time is nothing, viz., April 15th, June 15th, September 1st, and December 24th. Between April 15th, and June 15th, the imaginary Sun follows the true Sun, and, therefore, the clock-time is earlier than the Sun and the "Equation" is subtractive. Between June 15th and September 1st, the imaginary Sun precedes the true Sun, and the clock-time is later than the Sun, and the "Equation" is additive. Between September 1st, and December 24th, the clock-time is again earlier than the Sun, and the "Equation" is subtractive. After December 24th, and before April 15th, the clock-time is later than the Sun, and the "Equation" is additive.

The greatest difference between mean-time (common clock-time) and apparent time (time by the Sun) occurs on the 3rd of November, and it is 16m. 17sec. the Equation then being subtractive from apparent time; and the instant the Sun's centre is on the meridian, or he is Southing, the time by a clock regulated to mean-time should be 11h. 43m. 43sec. On the 11th day of February, the greatest additive Equation occurs, and when the Sun is Southing, a clock regulated to mean-time should show 14m. 32sec., after noon. All the calculations throughout this Almanack have been adapted to Greenwich mean-time.

Mean-time is easily reduced to apparent, by applying the Equation the reverse to that mentioned in the Almanack.

The other columns need no remark; as their respective headings fully explain themselves.

The whole of these calculations have been performed under the immediate superintendence of James Glaisher, Esq., F.R.A.S., and of the Royal Observatory, Greenwich.

The Second Page of each Month is devoted to Astronomical Appearances and Occurrences. It forms a Popular Treatise on the Astronomy of the Current Year, with much that is applicable at all times; and, therefore, it has a permanent interest. This department has also been written by Mr. Glaisher, of the Royal Observatory.

The Third Page of each Month is headed by a graceful Illustration of its Sports, Pastimes, and Pursuits; accompanied by Notes upon its Feasts and Fasts, and brief Notices of the Festal Observances by which the several Holidays have been transmitted through ages unto our own time. Throughout the Illustrations, the Artist has associated the Ages of Man with the Natural Appearances of the Year in each Month; the epigraphs to each being quoted from a quaint old poem—"The Age and Life of Man: a Short Description of the Nature, Rise, and Fall, according to the Twelve Months of the Year."

The Fourth Page of each Month is devoted to its Natural History; which needs no explanation, further than that, in writing the article, the best authorities have been consulted. This department has been written by Mr. Glaisher. The whole of the drawings in this and the Astronomical section, have been made by Mrs. Glaisher. This division of our Almanack will apply as well to any other year as to this; and it, therefore, has a permanent attraction. The application of a more perfect knowledge of the works of Creation is endless; this alone raises the study of Natural History very high in the scale of human inquiry, and we hope that we may have performed a service to many readers by imparting it in a more accessible and persuasive form.

The remaining portion of the Almanack is devoted to Useful Tables, for reference, &c., which have been derived from the best sources.

The Illustrated Almanack, as now offered to the public, is unique. It is earnestly hoped, that as this Almanack may be viewed in a multiple point of view, it will be found valuable. We may mention a few instances: in the first place, as a book of reference, in many respects not only for the immediate year for which it is formed, but, also, of perpetual interest; in the second place, it may be viewed as a book of instruction; and, thirdly, it may be viewed as a book of pleasant reading. Extreme labour and care have been expended upon its execution; so as to combine the precision and accuracy of an Almanack with its picturesque beauty.

☞ The Index of the Contents will be found upon the last page.

THE PRINCIPAL ARTICLES OF THE CALENDAR.

FOR THE YEAR OF OUR LORD 1846.

Golden Number	4	Dominical Letter	D
Epact	3	Roman Indiction	4
Solar Cycle	7	Julian Period	6559

NOTES.—As many persons are not aware of the significations of these terms, the following explanation has been appended :—

1. GOLDEN NUMBER.—This is in fact the *remainder* left after dividing 1844 and 1 added, by 19 years, that being the revolution or cycle in which the conjunctions, oppositions, and other aspects of the Moon happen on the same days of their respective months, as they were set down nineteen years before; and also within half an hour of the same time of day.

2. THE SOLAR CYCLE is the twenty-eight years that revolve before the same days of the week return to the same days of the month, the sun's place to the same signs, and degrees of the Ecliptic at the same dates and the leap years begin the same course over again with respect to the days of the week on which the days of the month fall.

3. THE DOMINICAL LETTER, which denntes Sunday or day of our Lord, (i.e. *Domini*,) was the ancient mode of notation, but is now only used to denote the Sabbaths. Thus the ordinary year being 365 days, or one more than 52 weeks, the Sunday letter falls back one letter each year; unless it is Leap Year, when a second move backwards takes place. As every fourth year is thus Bissextile, and as the number of letters employed is seven, the same order of Dominical Letters will return only in four times seven or twenty eight years, whereas, without that intervention, it would return in seven.

4. THE ROMAN INDICTION is a cycle of fifteen years, indicating the terms of certain payments due by the Roman Landholders to their Government.

5. THE JULIAN PERIOD is a revolution of 7980 years, and is produced by the continued multiplication of the three cycles above; viz. 19, 28, and 15.

FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan. 6	Birth of Queen Victoria	May 24
Martyrdom of King Charles I.	30	Restoration of King Chas. II.	29
Septuagesima Sunday	Feb. 8	Pentecost—Whit Sunday	31
Quinquagesima—Shrove Sunday	22	Trinity Sunday	June 7
Ash Wednesday	25	Corpus Christi	11
Quadragesima—1st Sunday in Lent	March 1	Accession of Queen Victoria	20
		Proclamation	21
St. David	1	St. John Baptist—Midsummer Day	24
St. Patrick	17		
Annunciation—Lady Day	25	Birth of Dowager Queen Adelaide	Aug. 13
Palm Sunday	April 5	St. Michael—Michaelmas Day	Sept. 29
Good Friday	10	Gunpowder Plot	Nov. 5
Easter Sunday	12	Birth of the Prince of Wales	9
Low Sunday	19	Advent Sunday	29
St. George	23	St. Andrew	30
Rogation Sunday	May 17	St. Thomas	Dec. 21
Ascension Day—Holy Thursday	21	Christmas Day	25

The year 5607 of the Jewish Era, commences on September 21st, 1846.

Ramadan (Month of Abstinence observed by the Turks) commences on August 23rd, 1846.

The year 1263 of the Mohammedan Era, commences on December 20th, 1846.

LAW TERMS, 1846,

As settled by Statutes 1, William IV., Cap. 70, S. 6 (passed, July 23rd, 1830); Cap. 3, S. 2 (passed, December 23rd, 1830.)

Hilary Term	Begins January 11	Ends January 31
Easter Term	„ April 15	„ May 8
Trinity Term	„ May 22	„ June 12
Michaelmas	„ Nov. 2	„ Nov. 25

UNIVERSITY TERMS, 1846.

OXFORD.

TERMS	BEGINS	ENDS
Lent	January 14	April 4
Easter	April 22	May 30
Trinity	June 3	July 11
Michaelmas	October 10	December 17

The Act, July 7

CAMBRIDGE.

TERMS	BEGINS	DIVIDES	ENDS
Lent	Jan. 13	Feb. 22. Noon	April 3
Easter	April 22	May 31, Midnight	July 10
Trinity	——	..	..
Michaelmas	Oct. 10	Nov. 12, Midnight	Dec. 16

The Commencement, July 7

ASTRONOMICAL SYMBOLS AND ABREVIATIONS EXPLAINED.

☉ The Sun	□ Quadrature	S Seconds of Time
☾ The Moon	☍ Opposition	♈ Aries
☿ Mercury	☊ Ascending Node	♉ Taurus
♀ Venus	☋ Descending Node	♊ Gemini
⊕ or ♁ The Earth	N North	♋ Cancer
♂ Mars	E East	♌ Leo
⚶ Vesta	S South	♍ Virgo
⚵ Juno	W West	♎ Libra
⚴ Pallas	° Degrees	♏ Scorpio
⚳ Ceres	′ Minutes of Arc	♐ Sagittarius
♃ Jupiter	″ Seconds of Arc	♑ Capricornus
♄ Saturn	H Hours	♒ Aquarius
♅ The Georgian	M Minutes of Time	♓ Pisces
☌ Conjunction		

NEW CORN LAW DUTIES

IF IMPORTED FROM ANY FOREIGN COUNTRY.

WHEAT.

Whenever the average price of Corn, made up and published in the manner required by law, the duty shall be for every Quarter.

Under 51s.			20s	62s. and under 63s.			10s.
51s. and under 52s.			19	63 „ 64			9
52 „ 55			18	64 „ 65			8
55 „ 56			17	65 „ 66			7
56 „ 57			16	66 „ 69			6
57 „ 58			15	69 „ 70			5
58 „ 59			14	70 „ 71			4
59 „ 60			13	71 „ 72			3
60 „ 61			12	72 „ 73			2
61 „ 62			11	73 and upwards			1

BARLEY.

Under 26s.			11s.	33s. and under 34s.			5s.
26s. and under 27s.			10	34 „ 35			4
27 „ 30			9	35 „ 36			3
30 „ 31			8	36 „ 37			2
31 „ 32			7	37 and upwards			1
32 „ 33			6				

OATS.

Under 19s.			8s.	24s. and under 25			4s.
19s. and under 20s.			7	25 „ 26			3
20 „ 23			6	26 „ 27			2
23 „ 24			5	27 and upwards			1

RYE, PEAS, AND BEANS.

Under 30s.			11s. 6d.	37s. and under 38s.			5s. 6d.
30s. and under 33s.			10 6	38 „ 39			4 6
33 „ 34			9 6	39 „ 40			3 6
34 „ 35			8 6	40 „ 41			2 6
35 „ 36			7 6	41 „ 42			1 6
36 „ 37			6 6	42 and upwards			1 0

WHEAT MEAL AND FLOUR.—For every barrel, being 196 pounds, a duty equal in amount to the duty payable on 38¾ gallons of Wheat.

OATMEAL.—For every quantity of 181¼ pounds, a duty equal in amount to the duty payable on a quarter of Oats.

MAIZE OR INDIAN CORN, BUCK WHEAT, BEAR OR BIGG.—For every quarter, a duty equal in amount to the duty payable on a quarter of Barley.

If the produce and imported from any British Possession (except Canada) in North America, or elsewhere out of Europe.

WHEAT.

Under 55s.			5s. 0d.	56s. and under 57s.			3s. 0d.
55s. and under 56s.			4 0	57 „ 58			2 0
58s. and upwards							

BARLEY.

Under 28s.			2s. 6d.	29s. and under 30s.			1s. 6d.
28s. and under 29s.			2 0	30 „ 31			1 0
31s. and upwards				0s. 6d.			

OATS.

Under 22s.			2s. 0d.	22s. and under 23s.			1s. 6d.
23s. and upwards				0s. 6d.			

RYE, PEAS, AND BEANS.

Under 30s.			3s. 0d.	32s. and under 33s.			1s. 6d.
30s. and under 31s.			2s. 6d.	33 „ 34			1 0
31 „ 32			2 0	34 and upwards			0 6

WHEAT MEAL AND FLOUR.—For every barrel being 196 pounds, a duty equal in amount to the duty payable on 38¾ gallons of Wheat.

OATMEAL.—For every quantity of 181¼ pound, a duty equal in amount to the duty payable on a quarter of Oats.

MAIZE OR INDIAN CORN, BUCK WHEAT, BEAR OR BIGG.—For every quarter, a duty equal in amount to the duty payable on a quarter of Barley.

CANADA CORN.

By the act passed in the Session of 1843, Corn from Canada is admitted into England on payment of 1s. a quarter duty; a duty of 3s. a quarter being imposed on Corn admitted into Canada.—Total Fixed duty 4s. a quarter.

STATEMENT

Of the Septennial Prices of each kind of Grain, as prepared for the Purposes of the Tithe Commission in each Year, from 1836 to 1843.

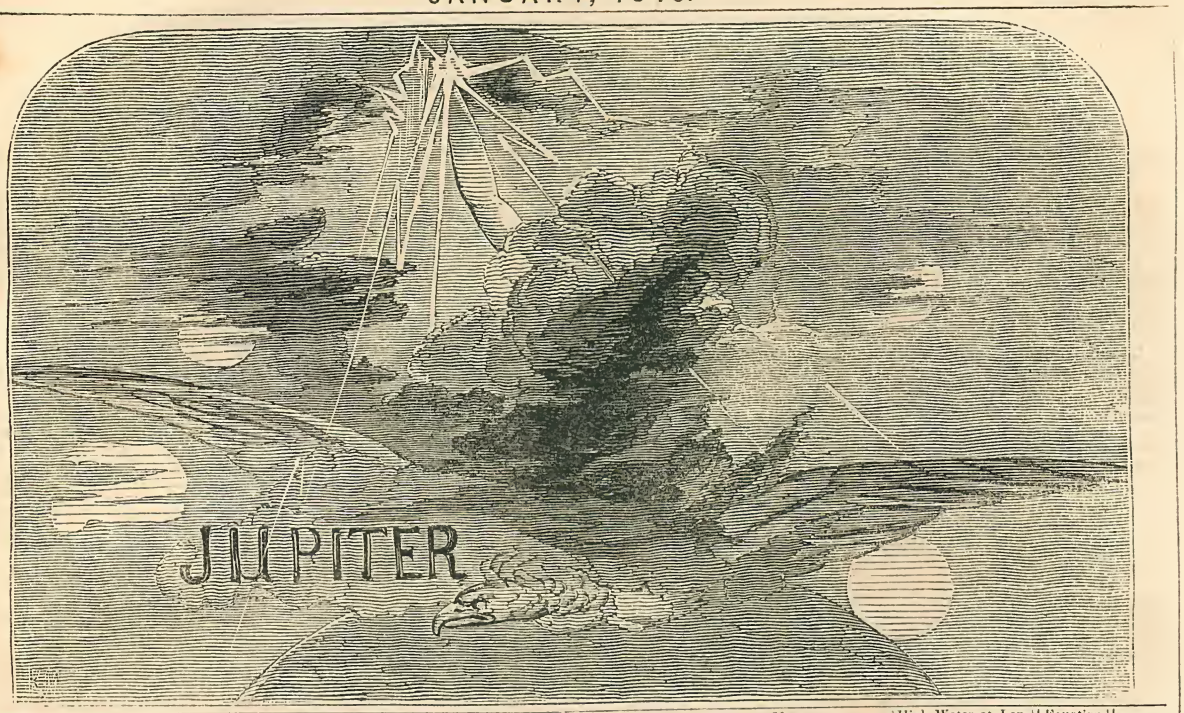
Periods of Seven Years ending Christmas.	Average Prices per Imperial Bushel.					
	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1836	6 8⅛	3 11⅝	2 9	4 3½	4 6¾	4 9½
1837	6 6⅝	3 11¼	2 8¾	4 4½	4 10	4 8½
1838	6 6¼	3 9⅜	2 8	4 2	4 6¾	4 8
1839	6 9	3 11¼	2 9¼	4 3½	4 8	4 9
1840	6 11⅝	4 1	2 10⅜	4 0½	4 10	4 10½
1841	7 3⅜	4 2	2 11½	4 5¼	4 11	4 10⅜
1842	7 7½	4 1½	2 10⅜			
1843	7 7⅜	4 0½	2 9½			

QUARTER SESSIONS IN THE SEVERAL COUNTIES OF ENGLAND AND WALES.

By the Act 1 Will. IV., c. 70, it is enacted, that "in the year 1831, and afterwards, the Justices of the Peace in every county, riding, or division, for which Quarter Sessions of the Peace by law ought to be held, should hold their general Quarter Sessions of the Peace in the first whole week after the 11th of October, in the first week after the 28th December, in the first week after the 31st of March, and in the first week after the 24th of June."

It having been found that some inconvenience occasionally arose from the time fixed for holding of the Spring Quarter Sessions interfering with that appointed for holding the Spring Assizes, an Act was passed 4 and 5 Wm. IV., c. xlvii. allowing a discretionary power of the Justices of Peace as to the time of holding the Spring Quarter Sessions, and they are empowered at the preceding Epiphany Sessions to appoint two of their body to alter the day for the Quarter Sessions, if they shall see occasion, so as not to be earlier than the 7th of March, nor later than the 22nd of April; notice of the day so appointed is to be advertised in such papers as the Justices shall direct.

JANUARY, 1846.



M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination South ° ′	Moon. Rises—R. Sets—S. H. M.	Moon. South. H. M.	Moon. Age D.	High Water at London Bridge. Morning. H. M.	High Water at London Bridge. Afternoon H. M.	Equation of Time. Add. M. S.	Day of the Year
1	Th	*Circumcision*—The Festival of the Circum-	8 8 R	23 1	9 15 S	Afternoon	4	4 15	4 41	3 50	1
2	F	cision was established about the close of the 5th century, and adopted in the Church of England, 1550	8 1 S	22 56	10 31 S	4 20	5	5 2	5 29	4 19	2
3	S	Lavater died, 1801	8 8 R	22 50	11 46 S	5 10	6	5 53	6 17	4 47	3
4	S	2nd Sunday after Christmas	4 3 S	22 44	Morning.	5 59	☽	6 4	7 3	5 14	4
5	M	Duke of York died, 1827	8 8 R	22 38	1 0 S	6 47	8	7 28	7 56	5 41	5
6	Tu	The Epiphany, instituted in 813, to com-	4 6 S	22 31	2 8 S	7 36	9	8 28	9 3	6 8	6
7	W	memorate the manifestation of the infant Saviour to the wise men of the East.—Old Christmas Day.—Dividend paid	8 7 R	22 23	3 16 S	8 24	10	9 37	10 13	6 34	7
8	Th	*St. Lucian*	4 8 S	22 16	4 17 S	9 13	11	10 52	11 31	7 0	8
9	F	Cape of Good Hope taken, 1800	8 6 R	22 7	5 15 S	10 2	12	:	0 4	7 25	9
10	S	Royal Exchange burnt, 1838	4 10 S	21 58	6 5 S	10 51	13	0 32	0 58	7 42	10
11	S	1st Sun. aft. Epiph.—Hilary Term begins	8 5 R	21 49	6 47 S	11 39	14	1 21	1 44	8 13	11
12	M	Plough Monday always follows the Epiphany.	4 14 S	21 39	7 24 S	Morning.	●	2 3	2 23	8 36	12
13	Tu	Its origin is involved in obscurity; but it is believed to be associated with the first use of the plough	8 3 R	21 30	Afternoon.	0 24	16	2 40	2 59	8 59	13
14	W	Venus sets at 8h. 11m. P.M.	4 17 S	21 19	6 50 R	1 10	17	3 15	3 31	9 21	14
15	Th	Queen Elizabeth crowned, 1559	8 1 R	21 8	7 53 R	1 53	18	3 46	4 2	9 42	15
16	F	Battle of Corunna, 1809	4 20 S	20 57	8 57 R	2 36	19	4 18	4 34	10 3	16
17	S	*St. Anthony*	7 59 R	20 46	10 3 R	3 19	20	4 50	5 5	10 33	17
18	S	2nd Sunday after Epiphany	4 23 S	20 34	11 9 R	4 2	21	5 23	5 38	10 43	18
19	M	Copernicus born, 1473	7 57 R	20 21	Morning.	4 46	22	5 56	6 15	11 1	19
20	Tu	*Fabian*—St. Fabian was the nineteenth bishop	4 26 S	20 8	0 16 R	5 32	☾	6 34	6 58	11 19	20
21	W	of Rome, he was chosen to that office in the year 241, and after being bishop thirteen years, suffered martyrdom in the Decian persecution	7 55 R	19 55	1 28 R	6 22	24	7 19	7 46	11 36	21
22	Th	Lord Byron born, 1788	4 30 S	19 42	2 39 R	7 15	25	8 16	8 55	11 53	22
23	F	Pitt died, 1806—Duke of Kent died, 1820	7 53 R	19 28	3 47 R	8 11	26	9 33	10 12	12 9	23
24	S	Fox born, 1794	4 33 S	19 13	4 53 R	9 11	27	10 53	11 34	12 24	24
25	S	3rd Sunday after Epiphany	7 51 R	18 59	5 52 R	10 13	28		0 9	12 38	25
26	M	Mercury rises 6h. 39m. A.M.	4 36 S	18 44	6 39 R	11 14	29	0 40	1 9	12 51	26
27	Tu	Hutton died, 1823	7 49 R	18 29	Afternoon.	Afternoon	○	1 37	2 1	13 4	27
28	W	London first lighted with gas, 1807	4 40 S	18 13	6 42 S	1 12	1	2 28	2 51	13 15	28
29	Th	Geo. III. died, 1820—Swedenbourgh b., 1689	7 46 R	17 57	8 6 S	2 8	2	3 16	3 39	13 16	29
30	F	Charles I. beheaded, 1648	4 44 S	17 41	9 25 S	3 0	3	4 1	4 23	13 36	30
31	S	Hilary Term ends—Pheasant Shooting ends	7 43 R	17 24	10 42 S	3 52	4	4 44	5 7	13 46	31

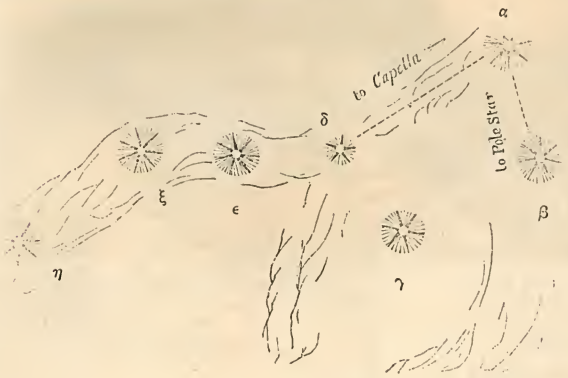
Right Ascensions and Declinations of the Planets.

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.	Days of the M.	Mercury. Right Ascension.	Mercury. Declination South.	Venus. Right Ascension.	Venus. Declination South.	Mars. Right Ascension.	Mars. Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
First Quarter 4d. 2h. 25 m. P.M.	1	8h. 0m.	20° 16′	22h. 0m.	13° 5′	0h. 24m.	2° 33′	1h. 57m.	10° 40′	21h. 18m.	16° 51′	0h. 25m.	1° 56′
Full Moon 12 2 2 „	5	17 49	20 21	22 17	10 59	0 35	3 54	1 57	10 44	21 21	16 41	0 25	1 68
Third Quarter 20 3 52 „	11	17 53	21 0	22 31	8 51	0 47	5 14	1 58	10 51	21 23	16 31	0 26	2 1
New Moon 27 9 23 A.M.	16	18 9	21 47	22 45	6 45	0 58	6 33	1 59	10 59	21 25	16 20	0 26	2 4
Apogee 13 7 „	21	18 31	22 25	22 56	4 43	1 10	7 51	2 1	11 9	21 27	16 10	0 26	2 7
Perigee 27 3 „	26	18 57	22 24	23 5	2 48	1 22	9 8	2 3	11 20	21 30	15 59	0 27	2 11

Right Ascension is angular distance, measured on the Equator from the first point of Aries, expressed in hours at the rate of fifteen degrees per hour.

ASTRONOMY is the Science of the Heavenly Bodies, and describes their motions, periods of revolutions, eclipses, magnitudes, &c. And we give, in the present year, a Description of those bodies, with their Appearances in each month, with clear directions to find the stars at different times of the year.

If a spectator observe the heavens on a clear night, they will appear to undergo a continual change. If his back be to the north, some stars will be seen ascending from a quarter on his left hand; others descending to a quarter on his right hand; and, at some intermediate point, each star will reach its greatest height. If he now turn his back to the south, and observe the northern portion of the sky, the same phenomena will present themselves: some stars will appear as before, ascending from a quarter now on his right hand, reaching their highest points and descending to a point on his left hand. Other stars will be seen moving with different velocities, and some, to all appearance, are motionless; about one of these stationary stars, all those near it appear to describe circles; that stationary star is the Pole Star. To be able to find this star is of great importance, as, from it, many guiding lines can be drawn to other stars, and it indicates the North, always; it can be found as follows:—the Great Bear is the most conspicuous of the Northern constellations, the tail, and part of the body of which, consist of seven bright stars; four of these have been compared to a plough or wain, and it is generally known by the appellation of "Charles's Wain," and which will be immediately recognised by the following drawing.

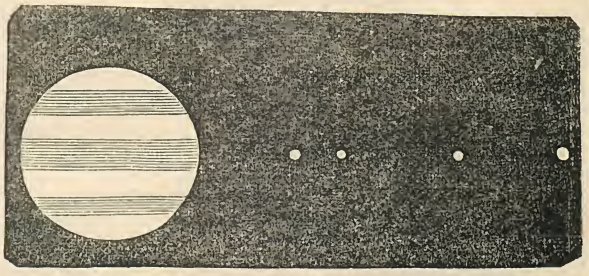


The two stars marked α and β, are called the pointers; a supposed line, drawn from β through α, and continued onwards, passes near the Pole Star, at a distance from α equal to six times the distance between the pointers; the Pole Star is brighter than any other star near it: and it is of the third magnitude. Having once found the Pole Star, it will be easily found again, since, to the naked eye, it appears always in the same place. A line from α through the Pole Star directs the eye to the constellation Cepheus, and a line from ϵ through the Pole Star points out the situation of the constellation Cassiopeia, each of these constellations being near to that part of the Milky Way where it is nearest to the Pole Star; we may remark here, then, an imaginary line, drawn from δ through α and continued more than twice the distance that α is from the Pole Star, nearly passes the bright Star Capella, in the constellation Auriga, and following at the distance that γ is from β in the Great Bear, is β Aurigæ. The beginner should commence with the stars in those constellations, and he may then refer the situations of others to their positions with respect to these.

That part of the heavens which is the boundary of the spectator's view, is called the Horizon: stars are said to rise when they first appear above it, and to set when they sink beneath it. That part of the horizon under the Pole Star, is called the North the opposite part is called the South and when the spectator is looking S. his left hand is towards the E., and his right hand towards the W. A line passing that part of the sky immediately over head (called the zenith), and joining the N. and S. points of the horizon, is called the Meridian, and it is in this imaginary line that stars always attain their highest points. All those stars whose angular distance from the Pole Star is less than the angular distance that the Pole Star is above the N. horizon, never rise nor set—all other stars do both rise and set. Almost all the stars in the heavens retain towards each other the same relative position—that is, they never approach nor recede from each other; for this reason they are called Fixed Stars; these stars are divided into constellations; the different stars of a constellation are marked by a Greek letter; they are also designated according to their apparent magnitudes; those of the first magnitude being marked α those of the second, β; those of the third, γ and so on of each constellation, and in all the drawings throughout this year, those of the 1st magnitude are drawn with eight spikes; those of the 2nd with seven; those of the 3rd with six; and those of the 4th with 5; as in the following engraving.

ASTRONOMICAL APPEARANCES IN JANUARY.

There are, however, other bodies, such as the Moon and Planets, which continually change their places, and of these the Moon is the most interesting; but during the months of January, and part of February, Jupiter will be more favourably situated than at any other time in the year, except a part of December, and with the exception of the Moon, there is no more interesting spectacle in the heavens than Jupiter. With a telescope of moderate power his four satellites can be distinctly seen; these are designated the 1st., 2nd., 3rd., and 4th., according to their respective distances from Jupiter, when at their greatest E. or W. position from the planet. They all move round him, passing from W. behind the planet to the E., and from the E. before the planet, to the W., in the former case causing eclipses, and in the latter, transits. Their relative positions, therefore, with regard to Jupiter, and to each other, are continually changing. Sometimes they all appear on one side of the planet, as will be the case on January 1st., at 7 P.M., and which is represented in the following drawing.



And on the 4th day they will all be on the opposite side: but most frequently some are on one side and some on the other.

Jupiter will be found during this month by considering a line drawn from the Pole Star, passing near to γ Andromedæ and to eleven degrees south of α Arietis; the Planet shines brighter than any other object near him. (*See the month of March for finding γ Andromedæ and α Arietis.*)

ASTRONOMICAL OCCURRENCES IN JANUARY.

PLANETS.				JUPITER'S SATELLITES.		OCCULTATIONS OF STARS BY THE MOON.		
				Eclipses of				
Names	Time of passing the Meridian or of Southing, on the 15th. day	When near the Moon	Angular distance from the Moon, North or South	1st. Sat.	2nd. Sat.	Names of the Stars.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of Moon.
				Emersion	Immersion and Emersion			
	H. M.	D. H.	DEG.	D. H. M.	D. H. M.		D. H. M.	
Mercury . . .	10 26 A.M.	25 7 P.M.	4 South	6 0 56 A.M.	6 6 17 } P.M. 8 43 20 } P.M.	2 Tauri .	8 5 0 P.M. 8 6 4 „	Dark Bright
Venus . . .	3 3 P.M.			7 7 25 P.M.	13 8 53 } P.M. 13 11 19 } P.M.			
Mars . . .	5 17 P.M.			14 9 21 P.M.	20 11 29 } P.M. 31 5 49 } P.M.	62 Piscium .	31 7 22 P.M. 31 8 25 „	Dark Bright
Jupiter . . .	6 20 P.M.	5 11 P.M.	2½ South	21 11 7 P.M.				
Saturn . . .	1 46 P.M.			23 5 46 P.M.	3rd. Sat.	δ Piscium .	31 7 54 P.M. 31 8 39 „	Dark Bright
Uranus . . .	4 47 P.M.			30 7 42 P.M.	3 0 57 A.M. } Immersion 31 7 10 P.M. } Emersion			

January 1st. Jupiter's four Satellites are W., and they are E. of the planet on the 4th., 11th., and the 25th., at about 7 o'clock in the evening.
January 1st., at 10h. 44m., P.M. the Earth is the nearest to the Sun during the year, being 93 millions 490 thousand and 620 miles from him.—*See July.*
January 26th., Venus at her greatest brilliancy in the morning.—*See the month of May.*

JANUARY.

The first five years then of man's life,
Compare to Januar;
In all that time but sturt and strife,
He can but greet and roar;
So in the fields of flowers all bare,
By reason of the frost:
Keeping the ground both soft and sound,
Yet none of them is lost.

OLD POEM; 1653.

BIRTH OF THE YEAR.—CHILD FOUND IN THE SNOW, BESIDE ITS DEAD MOTHER.—EPISODE IN THE GREAT CONTEST: THE SNOW STATUE.

THERE are few persons of a reflective turn of mind, who do not feel a sort of mirth-melancholy at the close of one year, and the commencement of another. This feeling, probably, led Coleridge to observe, "If I were a moralist, I might disapprove the ringing in the new, and ringing out the old year:—

Why dance ye, mortals, o'er the grave of time!"

A living divine remarks, "It is a merciful provision that the stream of time does not run on in one continuous flow, but that it is broken up and separated into larger portions, which are for 'signs and for seasons, and for days and years.' These changes and vicissitudes present us, successively, with renewed occasions and encouragements to amend our lives, and to set out, as it were, on a new course."

The Christian Year commences with the first Sunday in *Advent*, a season to prepare for the celebration of our Lord's first, and to ponder on his second, coming. The *Epiphany* (Twelfth Day), is kept to commemorate the manifestations of our Lord both as God and Man.

To the Epiphany, tradition assigned not only the worship of the Magi, but the baptism of Christ; the miracle of turning water into wine, and that of feeding the 5000, both considered to be typical of spiritual blessing; and which the eastern Christians, until shortly before the age of Chrysostom, when they adopted the custom of the Latin church in this respect, celebrated also as the Anniversary of the Birth of Christ.—(*Neale's Feasts and Fasts.*)

JANUARY is named from Janus, to whom it was dedicated, because, from its situation, it might be considered to be retrospective to the past, and prospective to the opening year. The Anglo-Saxons called January, *Wolf-monath*. Its holidays are very ancient; New Year's Gifts and Twelfth Day customs being as old as Rome itself; of the latter, Herrick sings:—

Give them to the king
And queene wassailing:
And though with the ale ye be whet here;
Yet part ye from hence,
As free from offence,
As when ye innocent met here.

On the first Monday *(Plough Monday)*, after, the festivities terminated; for then husbandmen resumed the plough.

The Sundays between the last Epiphany Sunday and Lent, should call us from the rejoicings of Christmas, and prepare us for profiting by the approaching season.

Late Winter begins with the year:—

Winter's white shrowd doth cover all the ground,
And Caecias blows his bitter blaste of woe;
The ponds and pooles, and streams in ice are bound,
And famished birds are shivering in the snowe.

As the day wears,

Through the hushed air, the whitening shower descends,
At first thin—wavering, till at last the flakes
Fall broad and wide, and fast, dimming the day
With a continual flow.

Shakspeare says, applicable to this month:—

Never resting Time leads Summer on
To hideous Winter, and confounds him there,
Sap-checked with frost, and lusty leaves quite gone,
Beauty o'ersnow'd and barren.

Yet, there is "good in every thing;" and the hardy band of boyhood begin the contest of life in the shower of balls at the snow statue; as Napoleon, when at school, at Brienne, constructed fortresses out of the same material. One of the weather-saws of the month tells us:—

If Janiveer Calends be summerly gay,
It will be winterly weather till the Calends of May.

Let us sum up with the satirist:—

Froze January, leader of the year,
Minced pies in vain, and calf's head in the rear—CHURCHILL.

The last allusion is to an annual insult offered on the 30th of January, to the memory of the unfortunate Charles I.; but which has long since yielded to the milder humanities of the times.

Foremost in the list of Festivals stands the Lord's day, or Sunday; "the day of the resurrection, the queen, the chief of all days, in which our life arose, and the victory over death was gained by Christ;" the day also in which, as Justin, the Martyr, urges, God, out of darkness and the primal matter, formed a world. Next in rank to Sunday, at least, if the frequency of its observance be considered, stood the Saturday, or, as it is universally called by the early writers, the Sabbath; a day observed with the same religious services, in all respects, as the Lord's day, though a difference grew up between the eastern and western churches, upon the question whether it should be kept as a festival or a fast. To these weekly holidays were added others of only annual recurrence, commemorative either of the principal events in the history of our Saviour, or of the sufferings of his more eminent followers. These Feasts were preceded by *Vigils* throughout the night, kept in the churches, or, in the earlier times, around the tomb of the Saint.

Jeremy Taylor has left us these Rules for Duties on Christian Festivals: "After the solemnities are past, and in the intervals between the morning and evening devotion, (as you shall find opportunity), visit sick persons, reconcile differences, do offices of neighbourhood, inquire into the needs of the poor, especially housekeepers; relieve them as they shall need, and as you are able: for then we truly rejoice in God, when we make our neighbours, the poor members of Christ, rejoice together with us."

[COMPILED BY JOHN TIMBS.]

JANUARY.

NATURE is the general name for all things which are not the result of human labour or contrivance; the works of Nature, therefore, abound everywhere, and the science of Natural History may be considered to be, the knowledge of Nature in all her departments.

It is impossible to study any portion of this vast field, without finding that it is dependant on other portions. The brief life of the insect, for instance, depends on the time of existence of the plant by which it is nourished, and this plant in its successive developement, depends on its locality, the season of the year, on the state of the atmosphere, &c., yet we cannot call the season of the year or any of the other circumstances the cause of its existence, though no doubt can exist of such a connection. It is, therefore, highly desirable at all times in noting down any periodical phenomena, to also note all such that may happen simultaneously. In the course of this year we shall mention some that may be expected to happen in each month, in an easy manner, without the technicalitiess of science, in the hope that many of our readers may be thereby interested, and that others may be asisted in their pursuit of Natural History.

THE GOLDEN CRESTED WREN.

The length of this handsome little bird in its feathers is about three inches and a half; weighs about seventy grains; bill slender, straight, having an inclination upwards; eyes remarkably lively; the feathers on the crown are long, forming a crest of a bright gold colour, which appears brighter by being contrasted with a band of black, passing from the eyes to the extremity of the crest; this band it can erect at pleasure, and with it at times nearly obscures the crest; legs slender; in the female, the crest is of a pale yellow, and the colours in general incline to brown (*Atlas des Oiseaux d'Europe.*)

This is a very beautiful bird, and it is the smallest of all European birds; if the above be the average weight, it would take one hundred to weigh one pound avoirdupoise. When stripped of its feathers, the length of the body does not exceed an inch, yet this bird braves our severest winters, during which its sprightly note may often be heard, even whilst snow is falling. From the circumstance of these birds generally resorting to the tops of the largest trees, winter is the best time for observing them, as at other times they are concealed by the leaves. In severe seasons, it approaches the habitations of man like the redbreast, but it does not, however, come so close to the vicinity of houses, nor does it remain there so long as the redbreast. Indeed, from its light weight, enabling it to seek its food at the extreme ends of slender twigs, where the redbreast cannot be supported, its resources are greater than those of that bird. Their nest is composed of green moss, interwoven with wool, and lined so thickly with small feathers as to conceal the eggs, which are from seven to eleven in number, of a pinkish white, rather darker at the thick end, and scarcely larger than peas. They are so light that it takes about eight hundred of them to weigh one pound.

During the month of January, the redbreast sings; larks collect in flocks; the nuthatch is heard; the gray, white, and yellow wagtails appear; the missel thrush; the hedgesparrow; the greater titmouse; the thrush; the common wren; the skylark, the woodlark and the chaffinch sing. Rooks resort to their nest trees; jackdaws begin to frequent churches; tribes of small birds surround farmhouses for food, and to obtain shelter from the cold; and towards the end of January or the beginning of February, is heard the chirping of the blue titmouse; this bird is popularly known as the tom tit, and as such will be recognised by the following engraving.

This lively little bird is in length rather more than four inches; weighs about five drachms and a half; bill strong, sharp pointed, very thick at the base—the hinder claw very long. In the female the colours are somewhat duller than in the male.—*Atlas des Oiseaux d' Europe.*

The plumage of this common little bird is pleasing from its delicate colours. A large portion on each side of the neck, a line over the eye leading to the back of of the head, and the forehead is white. A line of blackish-blue commences on each side of the base of the bill, passes the eyes, immediately under the line before mentioned to the back of the head, and surrounds the portion of white on each side of the neck—and continues up to the chin. On the lower part of the back of the neck is another portion of white. The head, the wings, and the tail are blue; the under parts yellow; and the legs are of a blueish grey.

THE BLUE TITMOUSE.

This bird feeds principally on insects, it is seen frequently in gardens and orchards, hanging from a branch, and minutely examining every crevice for the eggs and larvæ of different insects. In winter, it will often pull off the buds of trees, and its operations have been much dreaded by gardeners. But the eminent naturalist, Mr. Selby, observes, that, "the trifling injury sometimes committed by the abrasion of a few blossom buds, is more than compensated by the destruction of innumerable larvæ, and eggs of the insect tribe, which are usually deposited in or about those essential parts of fructification, and which, if allowed to proceed through the necessary changes, would effectually check all hope of produce." And again, it is very likely that they never attack a single bud except they perceive evident traces of insects. It is not always satisfied with insects for its food; at times it will attack small birds, particularly such as are ill, which it dispatches with its bill, by cleaving their skulls and picking out their brains; they place the foot on their food whilst picking it to pieces; and they conceal what they cannot eat for a future occasion, by carefully covering it with leaves, or any other substance that may be near.

The nest is generally in the holes of trees, it is composed of moss, well lined with feathers, hair, and wool; and the female lays from six to eight eggs, of a clear transparent white, speckled with rust colour at the larger end.

This bird is about the first among small birds, in discovering an enemy, a weazel or an owl; and it is distinguished above all others by its rancour against the latter, which it unremittingly persecutes whenever it ventures forth in daylight.

Insects are generally torpid, yet occasionally, on fine days, some will swarm under hedges in sunny situations; gnats may be seen playing about in the Sun's rays; the black slug, the gray slug, and the earth worm come forth chiefly at night in open weather.

Towards the end of the month the Snowdrop flowers, and if the month be mild the mezereon opens its delicate blossoms.

THE SNOWDROP.

This is the first flower that awakes from the repose of winter, and cheers us with the re-animation of nature; and hence it has been made the emblem of consolation—as the dove was sent forth from the ark to ascertain whether the waters were abated, so does the Snowdrop seem selected by Flora, to find whether the frost be mitigated, and as a herald to announce the approach of Spring.

FEBRUARY, 1846.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S.	Sun. Declination South	Moon. Rises—R. Sets—S.	Moon. Souths.	Age	High Water at London Bridge. Morning.	High Water at London Bridge. Afternoon	Equation of Time. Add.	Day of the Year
			h. m.	° ′	h. m.	h. m.	d.	h. m.	h. m.	h. m.	
1	S	4TH SUN. AFT. EPIPH.—Salmon Fishing begins	7 41 R	17 7	11 55 S	Afternoon	5	5 27	5 49	13 54	32
2	M	Candlemas Day	4 49 S	16 50		5 31	6	6 10	6 33	14 1	33
3	Tu	*St. Blaise*—The patron saint of the woolcombing craft; martyred under Diocletian, A.D. 289	7 38 R	16 32	Morning. 1 4 S	6 21	☽	6 55	7 18	14 8	34
4	W		4 52 S	16 15	2 10 S	7 10	8	7 43	8 11	14 14	35
5	Th	Sir Robert Peel born, 1788	7 34 R	15 56	3 8 S	7 59	9	8 47	9 27	14 19	36
6	F	Charles II. d., 1685—Dr. Priestly, d., 1804	4 56 S	15 38	4 1 S	8 48	10	10 8	10 49	14 23	37
7	S	Mary Queen of Scots beheaded, 1587	7 30 R	15 20	4 47 S	9 36	11	11 29		14 27	38
8	S	SEPTUAGESIMA SUNDAY	4 59 S	15 1	5 25 S	10 22	12	0 6	0 38	14 29	39
9	M	Sir R. Peel's New Corn Bill introduced, 1842	7 27 R	14 42	5 58 S	11 7	13	1 3	1 25	14 31	40
10	Tu	Queen Victoria married, 1840	5 2 S	14 22	6 26 S	11 52	14	1 45	2 5	14 32	41
11	W	Venus sets at 7h. 56m. P.M.	7 24 R	14 3	6 3 S	Morning.	●	2 23	2 38	14 32	42
12	Th	Lady Jane Grey executed, 1544	5 6 S	13 43		0 35	16	2 54	3 9	14 32	43
13	F	Talleyrand born, 1754	7 20 R	13 23	Afternoon. 7 54 R	1 18	17	3 26	3 40	14 30	44
14	S	*St. Valentine.*—At Rome, patron saints chosen	5 10 S	13 2	9 0 R	2 1	18	3 55	4 10	14 28	45
15	S	SEXAGESIMA SUNDAY	7 16 R	12 42	10 6 R	2 45	19	4 26	4 43	14 25	46
16	M	Capt. Cook killed, at Owhyhee, 1797, aged 51	5 14 S	12 21	11 15 R	3 30	20	4 57	5 13	14 22	47
17	Tu	Michael Angelo died, 1564	7 12 R	12 0		4 18	21	5 30	5 48	14 18	48
18	W	Martin Luther died, 1546	5 18 S	11 39	Morning. 0 23 R	5 8	22	6 6	6 27	14 13	49
19	Th	Copernicus born, 1473—Galileo born, 1564	7 9 R	11 18	1 33 R	6 1	☾	6 49	7 15	14 7	50
20	F	Jupiter sets at 11h. 25m. P.M.	5 21 S	10 57	2 37 R	6 58	24	7 41	8 15	14 1	51
21	S	Trinidad taken, 1797	7 5 R	10 35	3 36 R	7 56	25	8 59	9 42	13 54	52
22	S	QUINQUAGESIMA (SHROVE) SUNDAY	5 25 S	10 13	4 26 R	8 56	26	10 27	11 11	13 46	53
23	M	Sir Joshua Reynolds died, 1792	7 1 R	9 51	5 10 R	9 55	27	11 52		13 38	54
24	Tu	SHROVE TUESDAY—*St. Matthias*	5 29 S	9 29	5 46 R	10 53	28	0 25	0 56	13 30	55
25	W	ASH WEDNESDAY—The first day in Lent.	6 56 R	9 7	Afternoon.	11 50	○	1 22	1 47	13 20	56
26	Th	Formerly the consecrated palm branches used on Palm Sunday in the preceding year were preserved and burnt on this day, and their ashes blessed and sprinkled by the Priest over the heads of the people——Earl of Essex beheaded, 1601	5 32 S	8 45	6 5 S	Afternoon	1	2 11	2 34	13 10	57
27	F		6 52 R	8 22	8 15 S	1 38	2	2 57	3 19	13 0	58
28	S	Mars sets at 11h. 45m. P.M.	5 36 S	7 59	9 32 S	2 30	3	3 40	4 1	12 49	59

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Times of changes of the Moon, and when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth, in each Lunation.	Days of the M.	Mercury. Right Ascension.	Mercury. Declination South.	Venus. Right Ascension.	Venus. Declination South.	Mars. Right Ascension.	Mars. Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
		h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
First Quarter 3d. 5h. 11m. A.M.	1	19h. 32m.	22° 27′	23h. 12m.	0° 44′s	1h. 36m.	10° 39′	2h. 5m	11° 35′	21h. 32m.	15° 45′	0h. 28m.	2° 17′
Full Moon 11 9 12 „	6	20 4	21 41	23 15	0 41s	1 49	11 52	2 7	11 48	21 35	15 34	0 29	2 21
Third Quarter 19 4 44 „	11	20 36	20 23	23 14	1 44s	2 1	13 3	2 10	12 3	21 37	15 23	0 29	2 27
New Moon 25 7 32 P.M.	16	21 8	18 30	23 9	2 20s	2 13	14 12	2 13	12 19	21 39	15 11	0 30	2 32
Apogee 9 9 „	21	21 42	16 4	23 1	2 24s	2 26	15 19	2 16	12 36	21 42	15 0	0 31	2 38
Perigee 24 2 „	26	22 16	13 2	22 50	1 55s	2 39	16 22	2 19	12 54	21 44	14 49	0 32	2 44

NOTE—Declination is angular distance from the Equator, and it is North or South according as the object is North or South of the Equator; when, therefore, an object is in the Equator it has no Declination.

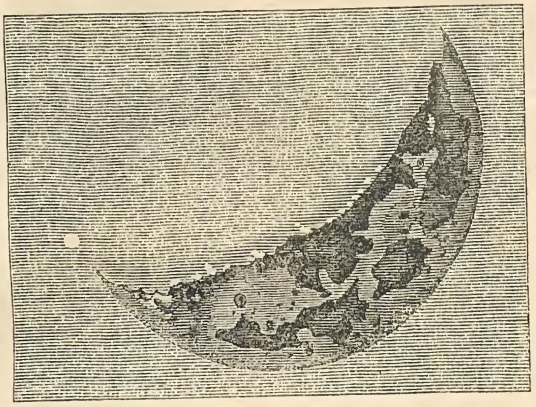
FEBRUARY.

The drawing of Jupiter in last month, not only represents the relative positions of the Satellites at that time, but it is a correct drawing of the Planet; and it will be observed that he is surrounded with faint substances, which appear like streaky lines; these are called his belts, and they are at times more distinct than at other times. When the Satellites interpose between the Sun and Jupiter, they produce solar eclipses precisely similar to those which the Moon causes at the Earth, when she is between the Sun and the Earth, and of these more than 350 occur in one of our years.

When the Satellite passes behind the Planet, with respect to a spectator on the Earth, it is hidden from us. And when it passes from behind the Planet it re-appears; in both cases it is an eclipse, and designated an immersion in the former, and an emersion in the latter case. These phenomena happen at some distance from the body of Jupiter, except when he passes the Meridian at midnight, and during the month preceding and following that time; at these times the eclipse takes place near to the body of the Planet; and when he passes the Meridian before midnight, it takes place on the West side of the Planet; and on the East, when he passes after midnight. During the whole of the year 1846, they will all appear West of the Planet, except in the month of December, when they will be to the East of him. By means of the rapid revolution of the Satellites, these eclipses occur with great frequency. The first being eclipsed every 42h.; the 2nd., every 85h.; the 3rd., every 7 days, and the 4th., every 17 days. The times at which these phenomena happen, and visible to us, are noted in every month.

At times, though it is but seldom, one Satellite is in contact, or passes over another; such an occurrence happened in 1843, on Sept. 10th, of the 1st and 3rd Satellites.—(*See Greenwich Observations*, 1843; *pages* 108 *and* 109.)

The diameter of the Planet is about 90,000 miles, and the most recent determination of the time in which the Planet turns completely round on his axis, or the length of one of his days is 9h., 55m, 21s.—(*See Professor Airy's paper on the time of rotation of Jupiter in the IX. Vol. of the Memoirs of the Astronomical Society).*



On February 1, during the evening, the Moon, Jupiter and Mars, are near to each other. At 10h. 3m., the Moon will occult Mars, or Mars will become hidden by the Moon, and remain thus hidden for twenty minutes, till 10h. 23m., at which time he will re-appear at the lowest part of the Moon. The phenomena is represented in the accompanying drawing. The Planet will disappear on the left hand side of the Moon, and a little above its enlightened part.

At the time of the phenomena the Moon will be due West. The planet Mars during this month will be near to Jupiter, appearing W. of him till the 15th and 16th days, at which time he will be immediately above Jupiter; and he continues above him by quantities becoming greater and greater, day by day. After the 16th day he will be E of Jupiter, and will be more and more separated from him day by day.

The mean distance of Mars from the Sun, is about once and a half that of the Earth; or, when he is nearest to the Earth, he is about half as far from us as we are from the Sun; his diameter is about 4,100 miles.

Mars' apparent magnitude is very variable, arising from his varying distance from the Earth, he being five times farther from us at the time he is in conjunction with the Sun, than when he is in opposition to the Sun; he also varies greatly in his apparent brightness, arising from sometimes presenting towards us the whole of his enlightened hemisphere, and sometimes only part. In consequence of these changes he varies, in particular instances, from being small and scarcely visible, to being bright and large. He may be easily distinguished from any other Planet or Star by his red appearance; this appearance is imputed to the density of his atmosphere. His Poles,* like those of the Earth, appear to be covered with perpetual snow. The brightness of the Polar regions has led to this supposition, and it appears to be in some measure confirmed from the circumstance of this brightness almost disappearing after being long exposed to the Sun; and being most evident when just emerging from the long night of his Polar winter The analogy between the Earth and Mars, is greater than between the Earth and any other Planet. The length of his day is nearly the same. His seasons are not very different. His year, though nearly equal to twice the length of ours, yet, as compared with the other Planets, Jupiter, Saturn, and Uranus, agrees most nearly with that of the Earth.

A few days after he has been in conjunction with the Sun, (that is, when Mars has been in, above, or below that straight line joining the Earth and the Sun, produced beyond the Sun to the distance of Mars), he rises some minutes before the Sun, and his motion is nearly towards the East. But the Earth's motion is nearly twice as great as that of Mars, and they are both moving in the same direction; therefore, Mars appears to be moving towards the West—if his motion be compared with the fixed stars, it will be found to be towards the East. This continues for nearly a year, or till his angular distance from the Sun is 137°; he then appears to be stationary for a few days. After this his motion is towards the West, and continues so till he is 180° distant from the Sun, or he is in, above, or below the straight line drawn from the Sun through the Earth and continued to Mars; or he is in opposition, and he passes the Meridian at midnight. His motion towards the West is now rapid—after some time it is slow, and when his angular distance is again 137° from the Sun, he is stationary as before.

During the whole of 1846, he will be dull and small. The time of rotation on his axis is 24h. 39m. 21s., and, therefore, the length of his day is nearly the same as one of ours. The Drawing of the Moon is a correct representation of her when she is from three to four days old, and to which Drawing, when speaking of her in a future month, we shall allude.

However, the Sun, as viewed from Mars, appears less by one-third than as viewed from the Earth: and consequently the degree of light and heat received at Mars, is less than that received by us, in the proportion of 4 to 9; or the Planet receives less than half that which we receive. No Satellite has ever been seen in attendance on him.

On February 1st, Mars will be found in a line joining α Arietes and α Ceti, and at about one-third of the distance between those stars from the latter star; during the month he will move towards the Pleiades, and at the end of the month he will assist in forming two equal triangles, the one consisting of Mars, α Ceti, and the Pleiades; the other Mars, α Arietis, and α Ceti. Jupiter, on the first of the month, will be found by considering a line drawn from the Pole Star through γ Andromodæ, and α Arietis, to 11° S. of the latter star; and at the end of the month he will be nearly midway between α Arietis, and α Ceti.

* The Poles of a Planet are those parts of its surface where the terminations of that imaginary line upon which the Planet appears to revolve occur.

ASTRONOMICAL OCCURRENCES IN FEBRUARY.

Planets. Names	Time of passing the Meridian or Southing, on the 14th. day	When near the Moon	Angular Distance from the Moon South or North
	H. M.	D. H.	DEG.
Mercury	11 19 A.M.		
Venus	1 34 P.M.	26 5 A.M.	5 North
Mars	4 32 P.M.	1 9 P.M.	⅔ South
Jupiter	4 35 P.M.	2 10 A.M.	2 South
Saturn	0 2 P.M.	25 1 A.M.	6 South
Uranus	2 53 P.M.		

Jupiter's Satellites. Eclipses of		
1st. Sat.	2nd. Sat.	
Emersion	Immersion and Emersion	
D. H. M.	D. H. M.	
6 9 38 P.M.	7 5 58 } P.M.	
15 6 3 P.M.	7 8 25 }	
22 7 59 P.M.		
	3rd. Sat.	
	D. H. M.	
	7 9 10 P.M.	
	Immersion.	

Occultation of Stars by the Moon. Names of the Stars	Times of disappearance and re-appearance	At the dark or bright limb of the Moon.
	D. H. M.	
ϵ Tauri	5 1 7 A.M.	Dark
	1 53 „	Bright
	19 5 14 A.M.	Dark
β¹ Scorpii	6 27 „	Bright

February 6th, 8h. 29m. A.M., Mercury at the greatest distance from the Sun.
February 7th, 4h. 4m. P.M., Venus stationary with respect to the Fixed Stars.—(*See May.*)
February 8th, Jupiter's Satellites all East, and on the 20th, they are all West of the Planet at about 7h. in the evening.
February 10th, 8h. 0m., P.M., Venus the nearest to the Sun.
February 16th, 5h. 10m. A.M., Mars and Jupiter near together, Mars being 2° N. of Jupiter.

FEBRUARY.

So to ten years I shall speak then,
Of Februar but lack;
The child is meek and weak of sp'rit,
Nothing can undertake.
So all the flowers, for lack of showers,
No springing up can make;
Yet birds do sing and praise their king,
And each one choose their mate.

OLD POEM; 1653.

THE CHILD ABROAD.—THE FIRST STRATEGY: BIRD-CATCHING.

THE Pagan Romans celebrated their *Juno Februata* on the day which is the vigil of Candlemas, February 1; and hence the name of the month February is unquestionably, derived.

Candlemas is evidently traceable to the ancient custom of lighting up churches and chapels with candles and lamps, and carrying them in procession. The practice of lighting the churches has been discontinued in this country since the second year of Edward the Sixth; in the Romish church, the original name, and all its attendant ceremonies, are still retained. Herbert, in his *Country Parson*, refers to a relic of this practice, in the custom of saying, "when light is brought in, *God sends us the light of Heaven*—and the parson likes this very well. Light is a great blessing, and as great as food, for which we give thanks: and those that think this superstitious, neither know superstition nor themselves."

St. Valentine's Day is of Pagan origin; but the poets refer it to the rural tradition of birds choosing their mates on this day:—

Hail, Bishop Valentine, whose day this is!
All the air is thy diocese,
And all the chirping choristers,
And other birds are thy parishioners.
Thou marry'st every year,
The lyrique lark, and the grave whispering dove;
The sparrow that neglects his life for love;
The household bird with the red stomacher;
Thou mak'st the blackbird speed as soon,
As doth the goldfinch, or the halcyon!

DR. DONNE.

Mrs. Bray relates a vestige of the custom of making presents remaining to the present day in Devonshire; where, on St. Valentine's Day, a young woman occasionally thus addresses the first young man she meets:—

Good marrow, Valentine, I go to-day,
To wear for you what you must pay,
A pair of gloves next Easter-Day.

"It is not, however, very common to send the gloves, unless there is a little sweethearting in the case." The yellow Crocus blowing plentifully about this time, has been called Hymen's Torch, and Flower of St. Valentine; or, as the the old verse says,

The Crocus blows before the shrine,
At vernal dawn of St. Valentine.

Septuagesima, &c.—The first Sunday in Lent being forty days before Easter, is, on that account, called *Quadragesima*, from the Latin for forty; and fifty, sixty, and seventy being the next round numbers above forty, the first, second, and third Sundays before Quadragesima, are called *Quinquagesima*, *Sexagesima*, and *Septuagesima*, from the Latin for their round numbers.

Collop Monday, or Shrove Monday, the day before Shrove Tuesday, was formerly the last day of flesh-eating before Lent, when our ancestors cut their flesh-meat into collops, or steaks, for salting or hanging up till Lent was over; hence, in many places, it is still customary to have eggs and collops or slices of bacon, at dinner on this day, as well as pancakes on the following day. These celebrations were termed "Shrovings," which Sir Thomas Overbury, thought a "Franklin," (see Chaucer), might observe without regarding them as "relique of Popery."

Shrove Tuesday, (the day before the first day of Lent), is so called, because in Romish times it was usual to confess on that day, which act is expressed by the Saxon terms Shrive or Shrove. It was formerly a season of extraordinary sport and feasting, an apprentices' holiday, &c. Cock-fighting and Throwing at Cocks were almost universally Shrove Tuesday Sports: the former cruelty was popular in Greece; English cocks are mentioned by Cæsar; but, the first notice of English cock-fighting is about 1170. The satiric pencil of Hogarth, and the moral muse of Cowper, have almost abolished this modern barbarism. The wicked practice of throwing at a Cock tied to a stake, on Shrovetide, is said to have an allusion to the indignities offered to the Saviour of the World before his Crucifixion; by others, this annual torture of the Cock is associated with St. Peter's crime, in denying his Lord and Master. The persecution was extended to the Hen: hence, the Ploughman's holiday on Shrove Tuesday, when, "after confession, he was suffered to *thresh the fat Hen*" *Eating Pancakes* and Fritters on this day is a harmless observance: according to Fosbroke, Pancakes are taken from the heathen *Fornacalia*, celebrated on February 18th, in memory of making bread before ovens were invented by the goddess Fornax. Brand considers that we have borrowed the custom from the Greek Church. The frying of the Pancakes was formerly commenced, universally, at the ringing of "the Pancake Bell;' and it was a holiday at the Colleges and Public Schools, where the Pancake was thrown over the bar or curtain dividing the upper and under forms. In Scotland, *Crowdie* (oatmeal and water) is eaten on this day, as Pancakes are in England. *Football* was another common Shrove Tuesday sport: it is still played in Derby, Nottingham, Kingston-upon-Thames, and a few other towns.

Ash Wednesday, the first day of Lent, originated in the blessing of Ashes on that day, "to put in remembrance every Christian man, the beginning of Lent and Penance, that he is but ashes and earth, and thereunto shall return;" and the ceremony was reserved at the Reformation.

The *Carnival*,

Some weeks before Shrove Tuesday comes about,

is still celebrated, on the Continent, in

All countries of the Catholic persuasion.

Rome is possessed by the gay madness for eight days; its characteristics being the masquerade in the streets, showers of *confetti* or mock sweetmeats, firing of mortars, racing of horses without riders, and the lighting of *moccoletti*, or wax tapers. At Naples, the Carnival is much like that at Rome; at Genoa it is indifferent; at Venice, the festival lasts from Twelfth Day till Shrove Tuesday. At Paris, it is principally kept on the three days preceding Ash Wednesday; and, upon the last day is the procession of the *Bœuf-gras*, or Government prize-ox, through the streets; then all is quiet until the Thursday of Mid-lent, or *Mi-carême* for which day only, the revelry breaks out wilder than ever. I. T

FEBRUARY.

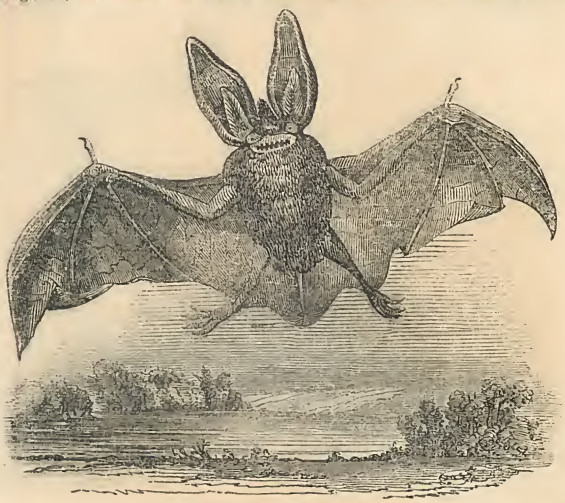
During this month the brown wood owl hoots; the common hen sits; the turkey cock struts and gobbles; the yellow hammer sings; the raven builds; rooks pair, as also do partridges; missel thrushes pair; the stone curlew clamours; the ring-dove coos; redwings and fieldfares depart; and the green woodpecker makes a loud cry.

THE GREEN WOODPECKER.

Woodpeckers are, generally speaking, handsome birds, neatly and stoutly made. Their first labours of hammering the tree appear to be the pairing call. The male begins this curious species of wooing, by beating against a hollow portion of the tree, on a female replying, a place is selected in which to build the nest. If it be necessary to excavate any portion of the tree in order to make the hole large enough to receive the nest, the pair labour and feed by turns until this is done. The largest of the British kinds of woodpeckers, is the Green Woodpecker, and which is represented in the above engraving. The following description of it is from "Bewick's British Birds."—"Its bill is two inches long, of a triangular shape, and of a dark horn colour: the outer circle of the eye is white surrounding another of red; the top of the head is of a bright crimson, which extends down the hinder part of the neck, ending in a point behind; the eye is surrounded by a black space, and from each corner of the bill there is a crimson streak pointing downwards; the back and wing coverts are of an olive green; the rump yellow; the quill feathers are dusky, barred on the outer web with black and white; the bastard wing is spotted with white; the sides of the head and all the under parts of the body are white, slightly tinged with green; the tail is marked with bars like the wings; the legs are greenish. The female differs from the male in not having the red mark from the corner of the mouth." This is the most common of the woodpecker genus in this country, and may be met with in most parts of this island, where it is readily discovered by its discordant note; and also by the noise it makes when seeking its food, which consists entirely of insects, their eggs, and larvæ. When it discovers a tree that is decayed, it tries with its bill different places, till by the sound it discovers the part that requires the least labour to perforate; it then pecks with its bill till it arrives at the unsound part, which generally affords a plentiful repast. The rapidity of the strokes is so great that they can scarcely be counted; nor can the motion of the head and neck be seen. *The tongue* is furnished with barbs, and with a glutinous secretion, by means of which it can readily take up small substances, and convey them to its mouth. It also feeds on beetles and ants, and it is more frequently seen on the ground than the other kinds of woodpeckers—and may be seen inserting its tongue into ant holes, from which it draws out these insects in abundance. It will sometimes make an aperture in the side of an ant hill with its bill and feet, and then feeds on the insects and eggs at its leisure. They usually lay five or six eggs in the hollow of a tree, at the depth of two feet or more from the entrance. The young ones climb up and down the tree before they are able to fly. When flying their motion is undulatory and irregular, proceeding forward by jerks, and they take but very short flights.

Occasionally, either the nettle or the brimstone butterfly appears; field crickets open their holes; frogs croak and spawn; the toad appears, and bats may frequently be seen if the temperature has been for some time at or above 50°. Following is the figure of one of the most common of the British bats.

Its length is one inch and three quarters, the extent of its wings is seven inches. Its ears, by which it is distinguished, are more than an inch in length; slightly rounded at the tips, and furnished with a kind of secondary auricle, so placed as to serve for a valve or guard to the auditory passage. It is most commonly seen fluttering about during the evenings of Summer and Autumn. They are supposed to produce two young ones at a birth, which they suckle for sometime, the young being naked and helpless; capable only of clinging to the teats of their mother, which they do most tenaciously. This habit is necessary, for the mother neither lies nor sits on the ground when she suckles her young, but hangs suspended to the branch of a tree or otherwise. When she goes out to feed, she bears the young thus attached to her body, and continues doing so till they are capable of flight. They lodge in old buildings, hollows of trees, or caves. In these recesses they pass the winter in a torpid state till the warmth of the atmosphere awakes them from their slumbers. The general appearance of the bat, together with its appearing in the dim twilight, at times when ignorance converts anything white into ghosts, has excited the idea of something hideous—and, therefore, the



THE LONG-EARED BAT.

ancients consecrated it to Proserpine, Queen of Hell. Painters usually exhibit fiends and demons with the leathern wings of the bat. Nevertheless, the bat is more useful than hurtful to man, by the destruction of so many insects, which are its favourite food. From experiments made by Spallanzani, on this species of bat and on others, it appeared that they would fly with precision in the darkest chamber without touching the walls, when their eyes have been closely covered; or even entirely out, and their sockets covered with leather. It would, therefore, appear that they must be possessed of some additional sense which enables them to do this.

February is usually found to be the most barren month in the year for flowers. The Crocus will, however, blossom; annexed is its representation:—

THE CROCUS.

This is one of the flowers of which Homer has composed the general couch of Jupiter and Juno.

> And sudden hyacinths the turf bestrow,
> And flow'ry crocus made the mountain glow.
> ILIAD, BOOK 4.

No flower is so sensible of the effects of light and heat as the crocus. Its petals expand during the day, and close at night. But they will expand at night under the light of a lamp or candle; or if placed within the influence of the heat of a fire, though shaded from the light of it, the petals open in such circumstances as readily as they do in bright light.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S.	Sun. Declination South	Moon. Rises—R. Sets—S.	Moon. Souths.	Age.	High Water at London Bridge. Morning.	High Water at London Bridge. Afternoon	Equation of Time. Add.	Day of the Year
			h. m.	° ′	h. m.	h. m.	d.	h. m.	h. m.	m. s.	
1	S	1st Sunday in Lent—*St. David*—St. David, the	6 48 R	7 36	Afternoon.	Afternoon	4	4 23	4 43	12 37	60
2	M	patron saint of Welchmen, was Archbishop of Menevy. He was a man of	5 39 S	7 14	11 55 S	4 13	5	5 2	5 21	12 25	61
3	Tu	considerable learning, and was reputed to possess the power of performing	6 44 R	6 51	Morning.	5 3	6	5 40	5 59	12 12	62
4	W	miracles. He died in 544, and was buried in the church of St. Andrew; but	5 43 S	6 28	0 57 S	5 54	☽	6 20	6 43	12 0	63
5	Th	his remains were afterwards removed to Glastonbury Abbey. *Ember Day*—The Wednesday, Friday, and Satur-	6 40 R	6 5	1 53 S	6 43	8	7 6	7 31	11 46	64
6	F	day of this week, are called Ember days, and the week in which they occur Ember week. On Ember days our forefathers ate no bread, but what was baked in a simple and primitive fashion under hot ashes; hence the name.	5 46 S	5 41	2 41 S	7 31	9	8 3	8 41	11 32	65
7	S	Venus rises at 3h. 2m. A.M.	6 36 R	5 18	3 23 S	8 18	10	9 22	10 5	11 17	66
8	S	2nd Sunday in Lent—Raphael born, 1483	5 50 S	4 55	3 58 S	9 4	11	10 45	11 26	11 3	67
9	M	£1 notes issued, 1797	6 31 R	4 31	4 28 S	9 49	12		0 2	10 47	68
10	Tu	Jupiter sets at 10h. 32m. P.M.	5 53 S	4 8	4 55 S	10 32	13	0 32	0 55	10 32	69
11	W	Bishops excluded Parliament, 1640-1	6 26 R	3 44	5 19 S	11 16	14	1 15	1 35	10 16	70
12	Th	*Gregory* first Bishop of Rome, Martyr, 590	5 57 S	3 21	5 41 S	11 59	15	1 55	2 13	9 59	71
13	F	Georgium Sidus discovered, 1781	6 21 R	2 57	Afternoon.		○	2 27	2 41	9 43	72
14	S	Admiral Byng shot, 1757	6 0 S	2 34	7 57 R	Morning.	17	2 58	3 13	9 26	73
15	S	3rd Sunday in Lent	6 16 R	2 10	9 7 R	1 29	18	3 27	3 43	9 9	74
16	M	Gustavus shot, 1792—Battle of Culloden, 1746	6 4 S	1 46	10 16 R	2 16	19	3 59	4 15	8 52	75
17	Tu	*St. Patrick*—A grand festival of the church of	6 11 R	1 23	11 23 R	3 6	20	4 32	4 50	8 34	76
18	W	Rome; and on which day every true Irishman considers it his bounden duty to	6 8 S	0 59	Morning.	3 58	21	5 7	5 25	8 16	77
19	Th	make himself as happy as a Welchman does on the 1st of March. The Irish	6 7 R	0 35	0 27 R	4 52	22	5 45	6 6	7 58	78
20	F	venerate St. Patrick, as the introducer of Christianity into Ireland. He is supposed to have been a Scotchman by birth. Mars sets at 11h. 41m. P.M.	6 11 S	0 11	1 27 R	5 49	☾	6 30	6 55	7 40	79
21	S	*Benedict*	6 3 R	North.	2 20 R	6 46	24	7 25	7 57	7 22	80
22	S	4th Sunday in Lent—Goethe died, 1832	6 14 S	0 36	3 5 R	7 43	25	8 40	9 25	7 4	81
23	M	Weber died, 1829	5 59 R	1 90	3 42 R	8 40	26	10 12	10 56	6 46	82
24	Tu	Venus rises at 4h. 27m. A.M.	6 17 S	1 23	4 15 R	9 35	27	11 35		6 27	83
25	W	*Annunciation—Lady Day*—This day is more fami-	5 54 R	1 47	4 45 R	10 29	28	0 9	0 39	6 9	84
26	Th	liarly known in England as Lady-day. It is kept as a festival in the English	6 20 S	2 10	5 12 R	11 22	29	1 6	1 30	5 50	85
27	F	church, in commemoration of the Incarnation of Christ. In England it is one of the quarter days—on which rent and other dues become payable.	5 50 R	2 34	5 37 R	Afternoon	●	1 50	2 13	5 32	86
28	S	Abercromby died, 1801	6 24 S	2 57	Afternoon.	1 7	1	2 36	2 56	5 14	87
29	S	5th Sunday in Lent—Siege of Acre, 1799	5 45 R	3 21	9 33 S	2 0	2	3 17	3 37	4 55	88
30	M	Allied Sovereigns entered Paris, 1814	6 28 S	3 44	10 41 S	2 52	3	3 56	4 17	4 37	89
31	Tu	Mercury sets at 8h. 26m. P.M.	5 41 R	4 7	11 40 S	3 44	4	4 36	4 55	4 18	90

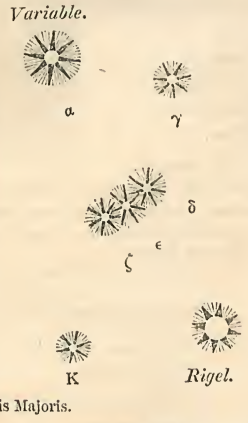
RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.	Days of the M.	Mercury. Right Ascension.	Mercury. Declinations.	Venus. Right Ascension.	Venus. Declinations.	Mars. Right Ascension.	Mars. Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
		h.	° ′	h.	° ′	h.	° ′	h.	° ′	h.	° ′	h.	° ′
First Quarter 4d. 10h. 32m. P.M.	1	22	10 57 S.	22	1 22 N	2	16 59	2	13 5	21	14 42	0	2 48
Full Moon 13 2 49 A.M.	6	23	7 2	22	0 11	2	17 58	2	13 24	21	14 31	0	2 54
Third Quarter 20 1 58 P.M.	11	23	2 39	22	1 13 S	3	18 54	2	13 43	21	14 20	0	3 0
New Moon 27 5 51 A.M.	16	0	2 1 N.	22	2 36	3	19 45	2	14 2	21	14 9	0	3 7
Apogee 8 7 ,,	21	0	6 37	22	3 47	3	20 34	2	14 22	21	13 59	0	3 14
Perigee 24 7 ,,	26	1	10 39	22	4 41	3	21 18	2	14 42	21	13 49	0	3 20

MARCH.

When the constellation Orion is near the meridian it is so well surrounded with stars, as to present the finest view of the heavens in this hemisphere, and it will be in this position during the evenings of the first months of the year, at the following times:—On the first day of January, at 11h.; on the first day of February, at 9h.; and on the first day of March, at 7h; and on intermediate evenings at intermediate times; therefore, the following remarks apply as well to these months, at those times, as they do to March. The following is the position of the principal constellations. Between the horizon and the Pole Star is a part of Draco; between the Pole Star and the Zenith is Camelopardalus; Auriga occupies the Zenith, which is indicated by the bright star Capella and β Aurigæ, now being near the Zenith; below Auriga is Orion; below Orion is Lepus. To the E. of the meridian is the constellation of the Lynx, situated between Auriga and the Great Bear; below the Lynx are Gemini, or the Twins, Cancer and Canis Minor; to the E. of the latter are Hydra and Leo. To the W. of the meridian and of Auriga, is Perseus, and under that is Taurus, and to the W. of Taurus is Aries; below Taurus is Eridanus, and below Aries is Cetus, a small part of which is setting. To the N. the constellations, Cepheus and Cassiopeia are W. of the meridian, and the latter may be distinguished at all times by the stars within it, forming the letter M or W. These two constellations are situated in the Milky Way, where it is nearest to the Pole Star. A little N. of W., at an elevation of 35° is Andromeda, and immediately below it is Pegasus, a part of which is setting; the brightest star in Andromeda, with three bright stars in Pegasus, form the large square or trapezium of Pegasus, and which will be readily distinguished. At an elevation of 15° in the N.W. by W. is Cygnus; Lyra is setting N. by W.; Corona Borealis, or the Northern Crown, is rising in the N.E. by N., and between it and the Great Bear is a part of Bootis, and in the E. by N. Virginis is rising.

Orion may be considered as the most beautiful of all the constellations; the principal stars in it are represented in the following Drawing, which, being correct, the constellation will be immediately recognised, and will act as a good guide to other stars.



α Orionis has "variable" attached to it, being one of those stars whose magnitude is variable—(See Sir J. Herschel's account of its variability:—*Memoirs Astronomical Society*, Vol. XI). We now proceed to explain the method of finding some of the principal stars visible during the evenings in the first months of the year. To a beginner, a moonlight night, when not too bright, is the best to learn some of the principal stars, because on such nights the smaller stars are not visible. Assuming that the observer has made himself acquainted with the Pole Star, the Great Bear, Capella, and the stars in the constellation of Orion—we proceed as follows:

In the above Drawing, a line from δ through ϵ and ζ soon meets with Sirius the Great Dog Star, at the angular distance of 23° from ζ, and 6° W. of Sirius is β Canis Majoris.

An imaginary line from the Great Bear to Capella continued onwards points out the Pleiades; about midway between γ Orionis (*See the above Drawing,*) and the Pleiades is the bright star Aldebaran, of a reddish tint. A line from the Pole Star to midway between the Great Bear and Capella passes to the constellation of the Twins, and to the stars Castor and Pollux. A line from Rigel (*See the above Drawing*) passing through ϵ Orionis also passes to Castor and Pollux. A line from Pole Star passing between Castor and Pollux, and continued onwards leads to Procyon the Little Dog Star. A line from Procyon to Sirius leads to α Columbæ, a bright star near the horizon. A line from Capella passing some distance to the left of Castor and Pollux leads to Regulus, as also a line from Aldebaran, a little to the right of these stars, leads to the same star.

A line from Capella through the Pleiades, leads to α Ceti, at the distance of 23° from the Pleiades, as does a line from α Orionis passing γ Orionis, lead to the same star. A line from Castor through Pollux leads to α Hydræ, situated about 12° above the horizon in the S.E. by S. A line from β Aurigæ, through Capella, and continued 34 degrees, leads to γ Andromedæ; the same line continued 13 degrees further meets with β Andromedæ; and continued 14 degrees farther meets with α Andromedæ, at an elevation of 18 degrees above the horizon in the W.N.W. The same line continued 20 degrees farther meets with α Pegasi, at an elevation of 7 degrees above the horizon in the W. by N.

About midway, between Capella and γ Andromedæ, are two stars, usually brighter than several others which are about this place, separated from each other by 10 degrees; the northern one is α Persii; the southern one is that very remarkable star β Persii (Algol.) At times this star shines as brightly as a star of the second magnitude, and at other times only as bright as one of the fourth magnitude; the interval of time between these different degrees of brightness is only 69 hours. A line from the Pole Star, through γ Andromedæ, leads to α Arietis; these two stars, with β Andromodæ, form a conspicuous triangle.

At the distance of 31 degrees West of the Pole Star, is β Cassiopeæ, the brightest of the stars in that constellation.

A line from β Cassiopeæ, through α Andromedæ, leads to γ Pegasi; these two stars, with α and β Pegasi, form that conspicuous square in Pegasus before referred to.

At an elevation of 15 degrees above the horizon in the N.W. by W., is α Cygni; and at an elevation of 12 degrees above the horizon in the E. by N., is β Leonis, just above the head of the Virgin now rising.

A line from γ in the Great Bear through δ (*See the Drawing in January*) continued 15° meets with α Draconis. Below the Pole Star at the distance of 38° are two bright stars, the one to the East is β Draconis; the one to the West is Y Draconis.

Throughout these disrections for finding the stars, whenever *distance* is mentioned it is to be considered as *Angular Distance*, the method of easily and correctly estimating which is fully explained in October.

That part of the Milky Way which is visible during the evenings of the first months in the year, may be traced as follows:—Starting from Cassiopeia and Perseus, which constellations are nearly covered by it, it passes by Auriga, the star Capella being a little N. of it, passes between Taurus and Gemini, over a part of Orion, being a little N. of the star α Orionis, and so down to the horizon and below it; after having reached its most southern extreme, it returns northward, dividing itself into two streams, and these parts become visible in the evenings during the last months of the year, and will be there spoken of.

During the month Venus is a morning star, and she will be nearer to the star α Aquarii (*to find which see the month of November*) than to any other star.

Jupiter is about 10° South of the Pleiades, and Mars is a little East of Jupiter.

The Pleiades, Jupiter and Mars will form a neat triangle throughout the month.

ASTRONOMICAL OCCURRENCES IN MARCH.

Planets.				Jupiter's Satellites.		Occultation of Stars by the Moon.		
				Eclipses of				
				1st. Sat.	2nd. Sat.			
Names	Time of passing the Meridian, or Southing, on the 15th. Day	When near the Moon	Angular Distance from the Moon North or South	Emersion	Emersion	Names of the Stars	Times of disappearance and re-appearance	At the dark or bright limb of the Moon
	H. M.	D. H.	DEG.	D. H. M.	D. H. M		D. H. M.	
Mercury . . .	0 43 P.M.	28 3	1 North	1 9 55 P.M.	11 8 7 P.M.	κ Cancri	9 10 38 P.M.	Dark
				17 8 15 "			9 11 48 P.M.	Bright
Venus . . .	10 47 A.M.				3rd. Sat.	50 Virginis	15 3 41 A.M.	Bright
							15 4 51 A.M.	Dark
Mars . . .	3 52 P.M.	2 2 P.M.	1½ North		D. H. M.			
Jupiter . . .	3 0 P.M.	2 2 A.M. 29 10 P.M.	1 South A little South		15 7 23 P.M			
Saturn . . .	10 21 A.M.	24 4	6¼ South					
Uranus . . .	1 4 P.M.	27 2	3 South					

March 2d, 9h 12m., Venus in inferior coujunction with the Sun.—*(See the month of May.)*
March 6th, 0h. 46m. A.M., Mercury in superior conjunction with the Sun.—*(See the month of September.)*
March 6th, and 27th, Jupiter's Satellites all on the W. side, and on the 16th. and 30th. they are all on the East side of the Planet, at about 7h. in the evening.
March 20th, 11h. 46m. P.M. the Sun enters Aries. Spring commences.
March 21st, 6h. 47. P.M. Venus stationary with respect to the fixed Stars.—*(See May)*
March 22d, 8h. 10m. A.M., Mercury the nearest to the Sun.
March 31st, 6h. 15m. A.M., Mercury at the greatest elongation, being East of the Sun 19°.—*(See September.)*

CHILDHOOD SEEKING THE EARLY FLOWERS.—THE FIRST GAME OF SKILL.

March, named from Mars, the god of war, was the commencement of the Roman year, and was, in fact, so considered in England before the alteration of the style; the legal year commencing on the 25th of March. Our Anglo-Saxon ancestors called it *Length-monath*, "because the days did then begin to exceed the nights in length. There is an old proverb which charges March with borrowing certain days from April; and these, being generally stormy, our forefathers endeavoured to account for this circumstance by pretending that March *borrowed* them from April, that he might extend his power so much longer. "Those," says Dr. Jamieson, "who are much addicted to superstition, will neither borrow nor lend on any of these days. If any one would propose to borrow of them, they would consider it as an evidence that the person wished to employ the article borrowed for the purpose of witchcraft against the lenders." There is a different proverb relating to this month, viz., that "A bushel of March dust is worth a King's ransom;" thereby expressing the importance of dry or dusty weather at this particular season of the year, in an agricultural point of view.

St. David founded many monasteries and religious houses, and built a hermitage and chapel in the vale of Llanthony, near the Black Mountains:—

A little lowly hermitage it was,
Down in a dale, hard by a forest's side,
Far from resort of people, that did pass
In travel to and fro; a little wyde
There was an holy chapelle edifyde,
Wherein the Hermit dewly wont to say
His holy things each morn and eventyde;
Therebye a christall stream did gently play,
Which from a sacred fountaine welled forth away. Spenser.

The custom of Welshmen wearing leeks on *St. David's Day*, has been traditionally referred to the Britons, under their general, St. David, gaining a victory over the Saxons, and transferring from their caps to their own, leeks, as signals of triumph. Sir Samuel Meyrick discredits this story; and infers from some lines of the time of James I., that the leek was assumed upon, or immediately after, the battle of Bosworth Field, which was won by Henry VII., who had many Welshmen (his countrymen), in his army, and whose yeomen-guard was composed of Welshmen; and this inference is strengthened by the fact, that the Tudor colours were white and green, the colours of the leek. Still, this explanation is shaken by the fact of the leek being a native of Switzerland, and, according to the *Hortus Kewensis*, not introduced into England till about the year 1562. Churchill thus satirises the custom:—

March, various, fierce, and wild, with wind-cracked cheeks,
By wilder Welshman led, and crowned with Leeks.

Lent is commonly said to be named from a Saxon word for Spring. It was originally called Quadragesima, and only lasted forty hours, from 12 on Good Friday to Easter morn; but it was gradually extended to forty days, after the fasts of Moses, Deut. ix.; of Elijah, 1 Kings xix.; of the Ninevites, Jonah iii.; and of our Lord himself, Matthew iv.; all of which fasted forty days. This fast begins on Wednesday, because the six Sundays, being festivals, were not included in the fasting days; and, therefore, unless four days were added before the first Sunday in Lent, the fast would only last thirty-six days instead of forty.—(*Elementa Liturgica.*)

Herrick has a quaint instruction:—

TO KEEP A TRUE LENT.

Is this a Fast, to keep
The larder leane,
And cleane,
From fat of veales and sheep?

Is it to quit the dish
Of flesh, yet still
To fill
The platter high with fish?

Is it to fast an houre
Or rag'd to go,
Or show
A down-cast look, and sowre?

No; 'tis a Fast to dole
My sheaf of wheat,
And meat,
Unto the hungry soule.

It is to fast from strife
From old debate,
And hate;
To circumcise thy life:

To show a heart grief-rent
To starve thy sin,
Not bin;
And that's to keep thy Lent.

Battle of Culloden.—The present year is the centenary of this memorable event, which finally extinguished the hopes of the House of Stuart; it was, indeed, a blood-stained victory:

Drummossie muir, Drummossie muir,
A waefu' day it was to me,
For there I lost my father dear,
My father dear and brethren three.

Midlent.—The Fourth Sunday in Lent was anciently kept by Catholics visiting their mother-church, and making their offerings at the high altar: thence arose the dutiful custom of visiting parents on this day, therefore called *Mothering Sunday;* when the children were treated with a regale of excellent furmety, or they presented their *mother* with a sum of money, a trinket, &c. On the following Sunday, preceding Palm Sunday, fried peas, or *carlings*, are eaten in the North.

St. Patrick's Day.—The shamrock, or trefoil, is worn as the national emblem of Ireland, from St. Patrick having referred to it in illustration of the Trinity, when he landed near Wicklow, to convert the Irish to Christianity in 433. Still, the trefoil is not fully expanded on St. Patrick's Day, and old authors affirm that the shamrock was eaten, and was a sour plant: now, wood-sorrel alone is sour, is an early Spring plant, is abundant in Ireland, is a trefoil, and is called by old herbalists, *Shamrog*.

With March we may expect "many weathers;" and there is a very old proverb, "March hackham, comes in like a lion, goes out like a lamb."

By the storms of this period, we are reminded of a touching epitaph on two infants buried in the churchyard of Hemel Hempstead, in Hertfordshire:

As fades the flower in early Spring,
When tempests sweep the land,
So droops the tender infant's form,
When seized by Death's cold hand.
Farewell, sweet babes, the loss is ours,
For you are gone to rest,
The Shepherd has but called his lambs,
To fold them to his breast. I. T.

MARCH.

During this month the pheasant crows; the wryneck appears; the crow builds; the golden crowned wren sings—(*See January*); the blackbird lays; the raven sits; the willow wren appears; the turkey lays; the sand marten, the swallow, and the pied wagtail appear.

BITTERN.

Of all the birds which resort to this island for food and shelter, that of the swallow tribe is of all others the most inoffensive and social; all, except one species, attach themselves to our houses, and clear the air of gnats and troublesome insects. The sand marten is the smallest of all our swallows, and the least numerous of them; it frequents the steep sand banks in the neighbourhood of rivers, in the sides of which it makes deep holes and places the nest at the extremity. The length of the bird is less than five inches. The bird's head, neck, breast and beak is of a mouse colour; over each eye there is a light streak; the throat, the forepart of the neck and belly is white, the wings and tail are brown. The pied wagtail is a very common bird; its length is about seven inches, bill black, eyes hazel, hinder part of the head and neck black; forehead, cheeks, and sides of the neck white; the fore part of the neck and part of the breast are black, bordered by a line of white; the back and rump are of a dark ash colour; lower part of the breast and belly white, legs black. During the years 1843 and 1844, the times of the arrival of many birds were recorded by John Blackwall, Esq., F.L.S., of Llanrwst, Denbighshire, North Wales. (*See the reports of the 13th and 14th Meetings of the British Association for the Advancement of Science.*)

About the beginning of this month, in wild and unfrequented places, near rivers, is heard the booming cry of the bittern; of this cry, Buffon says, "Solemn and dreary as in an evening may appear the various notes of the secluded inhabitants of the banks of the unfrequented rivers, whether we consider the loud scream of the wild goose, the croaking of the mallard, the whining of the lapwing, or the tremulous neighing of the jack snipe, there is no tone so dismally hollow as the booming of the bittern. It is impossible for words to give those who have not heard this evening call, an adequate idea of its solemnity. It is like the interrupted bellowing of a bull, but more hollow and louder, and is heard at a mile's distance, as if issued from some formidable being that resided at the bottom of the waters." To this dismal cry, superstition has added her terrors, and among peasants, whenever heard, it is supposed to be the forteller of evil. Buffon concludes his account of this singular bird, by quoting the following:—"I remember, says a modern author, in the place where I was a boy, with what terror this bird's note affected the whole village; they considered it as the presage of some bad event, and generally found or made one to succeed it. I do not speak ludicrously; but, if any person in the neighbourhood died, they supposed it could not be otherwise, for the night-raven had foretold it; but, if nobody happened to die, the death of a cow, or a sheep, gave completion to the prophecy." *Terrible as this cry is to the peasant, it is no other than the love cry to courtship, or connubial felicity;* and in this month the neighbourhood of the bird may be discovered by this note, which it has erroneously been supposed to make by thrusting its bill into the cavity of a dry reed, and blowing therein; the noise is however made when it is in an erect position, and seems to be caused by the bird's blowing hard through its bill, which at that time is nearly closed. The length of the bittern is about two feet, its height when it stands up is about two feet, and in breadth of the wings when expanded about four feet, and its weight is about three pounds; the length of its bill is about four inches.

The following is the description given by Bewick—(*See his British Birds*):

"The beak is strong at the base, straight, sharp on the edges, and gradually tapers to an acute point; the upper mandible is brown, the under inclining to green, the mouth is wide, the gape extending beyond the eyes, with a dusky patch at each angle; the irides are yellow. The crown of the head is somewhat depressed, and covered with long black feathers; the throat is yellowish white; the sides of the neck pale rust colour, variegated with black, in spotted, waved, and narrow transverse lines, and on the fore part, the ground colour is whitish, and the feathers, fall down in less broken and darker lengthened stripes. These neck feathers, which it can raise and depress at pleasure, are long and loose, and, inclining backward, cover the neck behind; those below them on the breast, to the thighs, are streaked lengthwise with black, edged with yellowish white; the thighs, belly, and vent are of a dull pale yellow, clouded with dingy brown.

"The plumage on the back and wings is marked with black zigzag lines, bars and streaks, upon a ground shaded with rust colour and yellow. The bastard wings, greater coverts, and quills are brown, barred with black. The tail, which consists only of ten feathers, is very short; the legs are of a pale green, bare a little above the knees; the claws, particularly those on the hind toes, are long and sharp, the middle ones serrated.

"The female is less than the male; her plumage is darker, and the feathers on her head, breast, and neck are shorter, and the colours not so distinctly marked."

The bittern, though not numerous, is dispersed throughout this country; it is a shy and solitary bird, living at most in pairs, and as soon as the young can leave, they follow the habits of their parents, living alone till they pair and have families. Thus, in whatever point of view we consider them, they are a very singular race of birds. For the want of room we cannot say more about them; but, from their peculiar habits, they are well worthy of a more lengthened account.

SPRING.

Fresh Spring, the herald of love's mighty King,
In whose cote-armour richly are display'd
All sorts of flowres, the which on earth do spring,
In goodly colours gloriously array'd.

SPENSER.

During this month the following plants will blossom:—The crocus in meadows; sweet violet on hedge banks; narcissus (daffodil), in moist thickets; the mouse-ear chickweed on walls and in rubbish; the sloe tree in hedges; hairy lady's smock in moist pastures; the common coltsfoot in moist places; the daisy in pastures; the common butcher's broom on gravelly heaths; the poplar and the yew tree may be expected to blossom.

The violet that so sweetly perfumes the morning air of Spring, and is the emblem of Modesty, now beautifully embroiders our banks where the soil is light and where there is partial shade.

DAISY.

The English name of Daisy is derived from a Saxon word, meaning Day's eye, possibly so called, from the nature of its blossom, which expands at the opening of day and closes at sun set.

The little daizee, that at evening closes.

SPENSER.

The daisy contributes more than any other flower to infantine amusement, and the joys of childhood, and, hence, it is the emblem of innocence.

——in the Spring and play-time of the year,
That calls the unwonted villager abroad
With all her little ones, a sportive train,
To gather kingcups in the yellow mead,
And pink their hair with daisies.

COWPER.

This little flower was highly thought of by Chaucer, who says—

——Of all the flowres in the mede,
Then love I most these flowres white and rede,
Such that men called Daisies in our-town:
To them I have so great affectioun.

The most careless observer of plants must have noticed that the daisy not only closes its petals at night, but that they are also carefully folded over the yellow disk in rainy weather.—(*See the beautiful poems on the Daisy, by Wordsworth, Montgomery, and Burns.*

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S.	Sun. Declination North.	Moon. Rises—R. Sets—S.	Moon. Souths.	Moon. Age	High Water at London Bridge. Morning.	High Water at London Bridge. Afternoon	Equation of Time Add.	Day of the Year
			H. M.	° ′	H. M.	H. M.	D.	H. M.	H. M.	H. M.	
1	W	All Fools' Day—This is a holiday, the origin of	5 38R	4 30	Morning.	Afternoon	5	5 14	5 32	4 0	91
2	Th	which cannot be traced; unless it be a travestie upon All Saints' Day (see Nov. 1). It is appropriated to innocent practical jokes among young	6 33S	4 53	0 34S	5 24	6	5 53	6 14	3 42	92
3	F	people, the person deceived being termed in England an April fool, in Scotland a gowk, and in France *un poisson d' Avril* (an April fish)	5 34R	5 16	1 18S	6 12	☽	6 36	7 1	3 24	93
4	S	Game Certificates expire	6 37S	5 39	1 56S	6 59	8	7 27	7 57	3 6	94
5	✠	Palm Sunday.—Called in the English prayer-book	5 29R	6 2	2 29S	7 44	9	8 37	9 19	2 48	95
6	M	the Sunday next before Easter; also sometimes called Passion Sunday, as being the commencement of Passion Week, or the week celebrative of the	6 40S	6 25	2 58S	8 28	10	10 0	10 38	2 31	96
7	Tu	sufferings or passion of our Lord	5 24R	6 48	3 21S	9 11	11	11 13	11 46	2 13	97
8	W	Mercury sets at 8h. 21m. P.M.	6 43S	7 10	3 44S	9 54	12		0 15	1 56	98
9	Th	*Maundy Thursday.*	5 20R	7 32	4 8S	10 38	13	0 39	0 57	1 39	99
10	F	Good Friday.—This day, as the anniversary of the	6 45S	7 55	4 29S	11 24	14	1 16	1 33	1 22	100
11	S	Crucifixion, has been for ages solemnly observed throughout Christian Europe	5 15R	8 17	4 49S	Morning.	○	1 51	2 8	1 6	101
12	✠	Easter Sunday.—	6 48S	8 39	Afternoon.	0 11	16	2 24	2 42	0 50	102
13	M	Easter Monday	5 11R	9 1	9 13R	1 1	17	3 0	3 18	0 34	103
14	Tu	Venus rises at 3h. 44m. A.M.	6 52S	9 22	10 20R	1 53	18	3 34	3 52	0 18	104
15	W	Easter Term begins	5 7R	9 44	11 23R	2 48	19	4 10	4 29	Subtract.	105
16	T	Passage of the Khyber Pass by Gen. Pollock, 1842	6 55S	10 5	Morning.	3 44	20	4 47	5 7	0 12	106
17	F	Franklin died, 1790, aged 84	5 2R	10 26	0 18R	4 42	21	5 29	5 52	0 26	107
18	S	Mars sets at 11h. 30m. P.M.	6 59S	10 47	1 3R	5 38	☾	6 18	6 47	0 40	108
19	✠	Low Sunday.—So termed from the church-service	4 58R	11 8	1 43R	6 34	23	7 19	7 53	0 54	109
20	M	being somewhat abridged or lowered from the preceding Sunday.—Byron died, 1824, aged 37	7 2S	11 29	2 16R	7 28	24	8 34	9 16	1 7	110
21	Tu	Spanish Armada destroyed, 1657	4 55R	11 49	2 46R	8 21	25	9 56	10 35	1 20	111
22	W	Duke of Sussex died 1843, aged 70	7 6S	12 10	3 13R	9 13	26	11 13	11 48	1 32	112
23	Th	*St. George.*—St. George, the patron saint of Eng-	4 51R	12 30	3 39R	10 4	27		0 14	1 44	113
24	F	land, as St. Patrick, St. David, and St. Andrew, respectively, are of Ireland, Wales, and Scotland	7 10S	12 50	4 5R	10 55	28	0 41	1 7	1 56	114
25	S	*St. Mark*—Princess Alice born, 1843	4 47R	13 9	Afternoon.	11 47	●	1 30	1 52	2 7	115
26	✠	2nd Sunday after Easter	7 13S	13 29	8 21S	Afternoon	1	2 12	2 35	2 17	116
27	M	Stothard died, 1834	4 43R	13 48	9 25S	1 32	2	2 55	3 14	2 27	117
28	Tu	Jupiter sets at 8h. 10m. P.M.	7 16S	14 7	10 23S	2 24	3	3 34	3 53	2 36	118
29	W	Last war with France commenced, 1803	4 39R	14 26	11 12S	3 15	4	4 12	4 31	2 45	119
30	Th	Mercury rises at 4h. 12m. A.M.	7 19S	14 44	11 53S	4 4	5	4 49	5 9	2 54	120

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.	Days of the M.	Right Ascension. Mercury.	Declination North. Mercury.	Right Ascension. Venus.	Declination South. Venus.	Right Ascension. Mars.	Declination North. Mars.	Right Ascension. Jupiter.	Declination North. Jupiter.	Right Ascension. Saturn.	Declination South. Saturn.	Right Ascension. Uranus.	Declination North. Uranus.
		RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.											
First Quarter 3d. 5h. 12m. P.M.	1	1h. 48m.	14° 6′	22h. 23m.	5° 20′	4h. 8m.	22° 6′	2h. 46m.	15° 7′	21h. 59m.	13° 37′	0h. 39m.	3° 28′
Full Moon 11 5 55 „	6	1 58	15 29	22 31	5 30	4 23	22 41	2 50	15 27	22 1	13 28	0 40	3 35
Third Quarter 18 8 24 „	11	1 59	15 23	22 42	5 21	4 36	23 12	2 54	15 47	22 2	13 19	0 41	3 42
New Moon 25 4 48 „	16	1 52	13 54	22 55	4 55	4 50	23 38	2 59	16 7	22 4	13 11	0 42	3 48
Apogee 5 1 „	21	1 40	11 33	23 10	4 12	5 4	24 0	3 3	16 27	22 6	13 4	0 43	3 55
Perigee 20 11 „	26	1 31	9 8	23 26	3 15	5 18	24 17	3 8	16 47	22 7	12 57	0 44	4 1

Note.—Where a blank occurs, in the column under high water, it shows that there is only one time of high water on that day. Thus, on April 8th, there is only one high tide: it occurs at 15 minutes after noon: and the next high water is at 39 minutes after midnight, or on the morning of the 9th day.

APRIL.

On the 25th. day an Eclipse of the Sun, visible in England, takes place, and as no phenomenon usually excites more interest and curiosity, we shall endeavour to explain its cause and give its appearance: it is the only one visible in England this year. The Sun, the Moon, and the Earth, being three solid bodies, whenever they are in the same straight line, an obscuration of either of the first two from the third, or an Eclipse, will take place, in consequence of the interposition of one of these solid bodies between the other two.

When the Moon is between the Sun and the Earth, which can only occur when she is new, an Eclipse of the Sun takes place; and when the Earth is between the Sun and the Moon, which can only take place when the Moon is full and opposite to the Sun, an Eclipse of the Moon takes place. The average number of Eclipses in one year, is about four; there cannot be less than two, nor more than seven, of which five will be of the Sun, and two of the Moon; and when there are only two they will both be of the Sun. During the year 1846 there will be only two, and of course both of the Sun.

The Moon, in consequence of her variable distance from the Earth, appears to us sometimes precisely the same size as the Sun; and if this be the case at the time of an Eclipse, such Eclipse would be total; sometimes the Moon being farther from us, appears to be smaller than the Sun; and if an Eclipse takes place at this time, the whole of the Sun would be hidden except a bright luminous ring around it: and the Eclipse would be annular; in other cases, however, which are by far the most numerous, the Sun will be only partially eclipsed. We shall now endeavour to make this more clear by an Illustration.

Let *a b* be considered to be the Sun: the distance from *a* to *b* is about 883,000 miles.

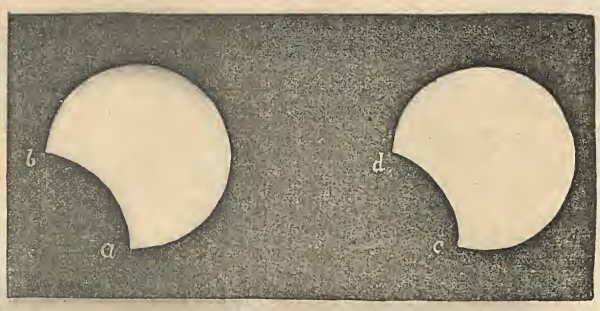
c d .. .. .. Earth: .. .. *c* to *d* is about 7,900 miles.

e f .. .. .. Moon: .. .. *e* to *f* is about 2,160 miles.

The distance that the Sun is from the Earth is about 95,000,000 of miles.

The distance that the Moon is from the Earth is about 240,000 miles.

If lines be drawn from the extreme portions of the Sun, as at *a* and *b*, just touching the extreme portions of the Moon at *e* and *f*, and continued till they meet the Earth at *g* and *h*, and if other lines were drawn for every other part of the Sun between *a* and *b*, just touching the Moon, and continued to the Earth, then the termination of these lines would inclose a portion of the Earth's surface. Now without this space no part of the Sun light is cut off, and no Eclipse takes place, but within it at every part a portion of the Sun light, more or less, is cut off. This portion would be found by drawing lines from any place just touching the outside of the Moon, and continued to the Sun: those parts of the Sun which would be included within these lines, would of course be hidden, and from those parts of the Sun which were not hidden by the Moon, Sun light would come, and a partial Eclipse would take place. If the observer be situated in the same straight line joining the centres of the Sun and Moon, then either an annular or a total Eclipse would take place, depending on the circumstances before referred to. The Eclipse of the 25th. of this month is annular on the Equator in the N. Pacific Ocean, the West Indies, the Atlantic Ocean, and a part of Africa. In Europe it is only partial, and the amount of it is represented in the following engraving, at the time of the greatest obscuration at Greenwich and at Dublin. It is evident that the being able to foretell an Eclipse, must depend on a good knowledge of the relative size, distance, and the motions of the bodies eclipsed, and the agreement in this respect of the predictions and observations of such phenomena, proves that the theory upon which such predictions are calculated must be near the truth.



GREENWICH. DUBLIN.

The Eclipse commences at *a* at 5h. 32m. P.M. at Greenwich; it is at its greatest obscuration at 6h. 14m. P.M, and ends at *b* at 6h. 54m. P.M.

At Dublin it commences at 5h. 29m.; its greatest obscuration is at 6h. 11½m, and it ends at 6h. 52m Greenwich time, or at 5h. 4m., 5h. 46m., and 6h. 27m., Dublin time respectively.

At Edinburgh the Eclipse is very nearly the same as at Greenwich, and commences at 5h. 32m.; its greatest obscuration at 6h. 8m., and ends at 6h. 43m. Greenwich time, or at 5h. 19m., 5h. 56m., and 6h. 31m. Edinburgh time respectively,

In observing the Eclipse, dark glasses should be used to defend the eye from the intensity of the Sun light. Should any of our readers not be provided with a coloured or smoked glass at the time the Eclipse takes place, they may observe the image in water, placed in a situation that the water is not agitated by the wind. But it will be better to be provided with a piece of smoked glass, which may be done as follows:—Common glass used for windows will do; first wipe it dry and warm it by the fire, or it may crack when applied to the blaze of a candle: then draw it gently through the flame, and repeat the same operation, only leaving a small portion at one end untouched, and darken the other end the most, and then gradually less and less towards the untouched end. The tinge at one end should be the slightest possible, and at the other so dark that you cannot see the flame of the candle through it. Then a darker or lighter part of this glass can be brought before the eye, according as the brightness of the Sun may need it.

On April 1d. Venus can be found as follows:—An *imaginary* line from α Andromedæ through α Pegasi (two of the stars in the trapezium of Pegasus) and continued 20 degrees beyond the latter star leads a little to the right of the planet. On the 16th day an imaginary line from β Pegasi through α Pegasi, and continued onwards leads to Venus at the distance of 18 degrees from α Pegasi. On the last day of the month a line from α Andromedæ through α Pegasi passes about 4 degrees to the left of the planet.

On April 1d. Mars will be 6 degrees North of Aldebaran, and Mars, Aldebaran and the Pleiades form a neat triangle. During the month Mars will be moving towards Castor and Pollux. At the end of the month a line from the Pole star to α Orionis passes Mars at the distance of 18 degrees North of α Orionis.

ASTRONOMICAL OCCURRENCES IN APRIL.

PLANETS.

Name	Time of passing the Meridian or Southing, on the 15th. day	When near the Moon	Angular Distance from the Moon North or South
	H. M.	D. H.	DEG.
Mercury . . .	0 20 P.M.		
Venus . . .	9 20 A.M.	22 9	3 South
Mars . . .	3 14 P.M.	29 7	5 North
Jupiter. . . .	1 25 P.M.	26 6	¼ North
Saturn . . .	8 31 A.M.	21 3 A.M.	6 South
Uranus . . .	11 9 A.M.	24 2 A.M.	3 South

OCCULTATION OF STARS BY THE MOON.

Name of the Stars.	Times of disappearance and re-appearance.	At the dark or bright limb of the Moon.
	D. H. M.	
λ Geminorum .	3 11 51 P.M.	Dark
	4 0 49 „	Bright
A² Caneri .	5 7 0 P.M.	Dark
	5 8 4 „	Bright
28 Virginis .	10 7 37 P.M.	Dark
	10 8 14 „	Bright

April 7th, 9h. 30m. P.M., Venus at greatest brilliancy.—*(See May.)*
April 19th, 9h. 16m. A.M., Mercury in inferior conjunction with the Sun.—*(See September.)*
April 12th, 7h. 49m. Jupiter's 2nd. Satellite Eclipsed, re-appearing on his W. side at the distance of one-third of his diameter from him. ***The Satellites are not*** visible after the 18th. of this month, Jupiter being too near to the Sun.
April 25th, Sun Eclipsed.—*(See above).*

SMYTH.

APRIL.

Then brave April doth sweetly smile,
The flowers do fair appear,
The child is then become a man,
To the age of twenty year.
If he be kind, and well inclin'd,
And brought up at the school,
Then men may know if he foreshow,
A wise man or a fool. OLD POEM; 1653.

LET LOOSE FROM SCHOOL.—BIRDS' NESTING.—GAMESOF ACTIVITY AND STRENGTH.

APRIL is usually considered to have been named from *Aperire*, to open; either from the opening of the buds, or of the bosom of the Earth, in producing vegetation. The Saxons called it *Oster*, or *Easter Monath*, in which month the feast of the Saxon goddess *Eastre*, *Eoster*, or *Easter*, is said to have been celebrated.

Palm Sunday is named from the boughs of Palms being carried in procession in imitation of those which the Jews strewed in the way of Christ, when he went up to Jerusalem. The Palm-tree was common in Judea, and planted everywhere by the way-side. Sprigs of box-wood are still used as a substitute for Palms in Catholic countries; and willow, laurel, yew, and box, for the decoration, or *dressing*, of churches in England. The blossoms of the willow, too, are called *Palm*, because of their coming forth before any leaves appear, and flourishing most before Easter, wherefore they are gathered to deck houses on Sundays. The ceremony of bearing Palms in England was retained till the 2nd year of the reign of Edward VI.; and it was formerly a proverbial saying, "He who hath not a Palm in his hand on Palm Sunday must have his hand cut off." The custom still lingers in some rural districts, though not as a religious observance.

In the Catholic church, Palm Sunday is the first day of the *Holy Week*; and at Rome, Palms are blessed by the Pope, who is borne in grand procession round the Sala Regia of the Vatican; where the Tenebræ and Miserere are sung by the Pope's choir, as well as at St. Peter's.

The Great or Passion Week was kept by the early Christians, as a season of rigorous abstinence from whatever could delight the body, that the soul might more readily accompany the Saviour in his sufferings, and realize "the great, the unspeakable blessings procured in it for man." For, in this week, to sum up the teaching of the Church in the eloquent language of Chrysostom, "the long war was brought to a close, death was quenched, the curse removed, the tyrannous empire of the devil overthrown; his goods plundered, God and man reconciled; heaven became accessible, men and angels were joined together; what had been dissevered was united; the partition wall broken down, the barrier taken away; the God of peace made peace between the things above and the things on earth." The services of the church followed throughout the course of this week, the actions or sufferings of the Saviour. Thus, on the Holy Thursday, the sacrament was received in the evening after supper, because that was the time of its original institution.—(*Feasts and Fasts*). This was called also *Dies Mandati*; *i. e.* the command of Christ to his disciples when he washed their feet, to follow his example; whence comes *Maundy Thursday*; on this day, the Pope washes the feet of Poor priests at Rome, as the Kings of England, or their Almoners, formerly washed the feet of as many poor men as the soverign was old, at Whitehall. Alms, or *maund*, were then distributed; and this part of the custom is retained to our day; for which purpose, certain coins are struck by the Royal Mint every year and termed *Maundy Money*.

Good Friday, as the day on which the Lord gave himself up for us, was the appointed time for the absolution of those who had been subjected to penance for their sins. The Fast of Friday was prolonged, by all who were able to bear it, over the succeeding Saturday, while Christ remained in the tomb till cock-crow on the Easter morning; and during the whole of that night the people continued assembled in the churches, in the expectation—an expectation apparently derived from the Jews—that on that night the Messiah would appear to receive his kingdom; of which event, as is well known, the Christians from the earliest times, confidently expected the speedy happening. Thus was the period preceding Easter kept in the fourth century.—(*Feasts and Fasts*.) And, "as Good Friday is so called from the blessed effects of our Saviour's Passion, so the day of his Resurrection is named Easter, from the Saxon *Oster, to rise*."—(*Elementa Liturgica*.)

Of the present observances of Easter we can give but a few notes. At Rome, the ceremonies are continued on Friday and Saturday, and terminate on Sunday with the Pope blessing the people from the Portico of St. Peter's; illuminations, fireworks, &c. In England, the Good Friday Bun is eaten, derived from the sacred *Boun*, which was offered at the Arkite Temples; marked with the cross in commemoration of the passion of Christ on this day. The dressing of churches with flowers and evergreens on Easter Day is but little kept up. The Easter Holidays are but slightly observed; though our ancestors had their water quintain, ball-play, heaving or lifting, barley-break, stool-ball, &c.; and the good King Alfred appointed the week after Easter to be kept holy. On "God's Sondaye," (Easter Day,) the ancient hall fire was discontinued, the "blaek wynter brondes" put aside, and the hearth "gayly arrayed with fayre flowres, and strewed with green ryhes all about."—(A.D. 1511.)

St. George was a brave soldier, in the ranks of Diocletian. Edward III. at the battle of Calais, in the year 1349, joined to England's guardian St. Edward the Confessor, the name of St. George; and invoked both to his arms: next year, the order of the Garter was established, dedicated to St. George, whose emblem is preserved in its rich jewel.

St. Mark is depicted with a lion couchant, winged, by his side; because the lion is emblematical of the nervous solidity of his writings; and the wings of the more than human powers displayed in their composition.

On the 25th of April is the Jewish Festival of the Passover, or Paschal Lamb. The Paschal flower usually flowers at this period, in chalky pastures.

April is the season for healthy out-door sports: the hoop may be seen in classic sculpture; and leap-frog is mentioned by Shakspeare and Ben Jonson.

An old poet has thus versified the weather characteristic of the month:

May never was the month of love,
For May is full of flowers;
But rather April wet by kind;
For Love is full of showers. I. C.

APRIL.

This month is the most remarkable in the year for the arrival of migratory birds; amongst them may be expected the yellow wren, the common sandpiper, the redstart, the cuckoo, the lesser pettychaps, the black cap, the whitethroat, the whinchat, the nightingale, the pied flycatcher, the swift, the middle yellow wren, the willow wren, the fern owl, or goatsucker, &c. The Snipe pipes, the Titlark sings, and the Turtle coos.

THE GOATSUCKER.

The Yellow Wren is about five inches in length; bill brown, inside and edges yellow; eyes hazel; upper parts of its plumage yellow; inclining to a pale olive green; under pale yellow; over each eye there is a whitish streak; the wings and tail are of a dusky brown, with pale edges; legs yellowish brown. This species is rather scarce.

The Common Sandpiper is about seven and-a-half inches in length; the bill is about an inch long, black at the tip, fading into pale brown towards the base. The head and hinder part of the neck are brownish ash, streaked downwards with dark narrow lines; the throat, the fore part of the neck and the belly are principally white. The principal colour of the upper parts of the plumage is ash, blended with glossy olive brown. The Redstart is six inches in length; is but little more than half an ounce in weight; bill short; eyes hazel; legs and claws slender.

The cry of the male Cuckoo is well known, and is generally heard about the middle of this month; it ceases the latter end of June. The bird is fifteen inches in length, twenty five in breadth, and it weighs about four ounces-and-a-half; its bill is black, and somewhat bent; irides and eyelids yellow; the tail consists of ten feathers of unequal length. The female differs in colour, being more inclined to brown, and is nearly an inch shorter than the male.

The Fauvette or Pettichaps,—length about six inches; bill blackish; eyes dark hazel; upper part of the body dark brown; throat and belly of a silvery white. This bird frequents thickets, and imitates the notes of other birds. The Lesser Pettychaps,—length six inches; bill pale brown; upper part of the body brown; this bird is also a mocker. The Black Cap is about five inches in length; the top of its head is black; sides of the head and back of the neck ash colour; beak and wings of an olive grey; the throat and breast of a silvery grey; belly white; legs blue.

The White Throat is about five inches and a half; bill dark brown, lighter at the base; the upper part of the head and beak are of a reddish ash colour; throat white; breast and belly silvery white; the wings and tail are dusky brown. The breast and belly of the female are entirely white.

The Whinchat is in length about five inches; bill black; the feathers on the head, neck and back, black; a streak of white passes from the bill over each eye, towards the hinder part of the head, which is white.

The Nightingale is six inches in length; bill brown; the whole of the upper part of the body is brown: the under parts pale ash colour. The female is very similar; this bird is, therefore, not remarkable for the richness of its colours, though deservedly so for the excellence of its song.

The Pied Flycatcher, length nearly five inches, breadth about nine; bill black; eyes hazel; forehead white; top of the head, the back, the tail and legs are black; all the under parts from the bill to the tail are white; the female is rather less, and has the colours more blended, the white parts approaching to dusky and the black not so deep a hue, and also wants the white on the forehead, so conspicuous in the male; both sexes vary in their markings, as is frequently the case with pied birds.

The Swift is nearly eight inches in length; the wings measure from tip to tip, eighteen inches; its general colour is sooty black. It arrives later, and departs sooner than any other of the swallow tribe.

The Goatsucker, which we have engraved above, has several names in different parts of the country, as the night-hawk; fern-owl; churn-owl; goat-owl; wheel-bird; night-jar; night-swallow, &c.

This bird is the only night-bird which preys upon insects on the wing; it has a great number of names, a few of which we have mentioned. The engraving will give some idea of its form and markings. Its length is about ten and a half inches; its breadth about eighteen; weight about three ounces; bill small, flat, weak, and somewhat hooked at the tip; mouth large; eyes large, full and black; legs slender, short, feathered below the knees. The plumage is freckled with browns of various hues, mixed with rust colour and white. The male is distinguished by an oval white spot on the two outside tail feathers.

This bird is very much in the habit of resorting to cool places, where cattle stand when annoyed by flies; and it stood accused at a very early age of sucking goats, which has no foundation but in ignorance; the bill being quite unfit for any kind of suction, and, instead of doing any harm to animals in such situations, it does them a great deal of good by ridding them of flies which annoy them.

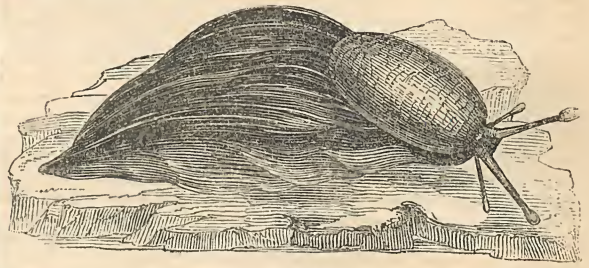
Much activity during this month pervades the insect world; and, every day fresh ones are seen. Of these, the following may be expected:—the stinging fly; red ants; common black fly; lady bird; black snail; shell snails, in numbers; large bat; several kinds of flies; cabbage butterfly, &c.

The mouth of the goatsucker, including the bill, is very curious. Its gape is wider than that of any other birds of these islands. During the day it resorts to low woods and coppices, where it remains till the dusk of the evening, when it goes in search of food, which consists of beetles, moths, cockchaffers, &c.

The Slug is characterised by having an oblong body, furnished above with a fleshy shield, and beneath with a flattened expansion, answering the purpose of a foot or locomotive organ. On the right side of the breast is a large orifice; and on the front of the head are four feelers or tentacula, or, as they are popularly termed, horns.

The most familiar example of this genus is the common black slug, generally called the black snail, so frequently seen in fields and gardens in damp weather. They are produced from whitish gelatinous eggs, deposited in shady situations, beneath the surface of the ground.

This animal is so well known that a more minute description of it would at first appear not needed; but, as it is one of those unfortunate animals whose appearance inspires mankind with disgust, and renders it an object of persecution, as such, we fear but few of our readers would be tempted to examine it, or to think it worthy of attracting any portion of their admiration. We shall, therefore, be more particular in its structure than we otherwise should, in the hopes of awakening some feelings of compassion towards it.



BLACK SLUG.

The body is, as before remarked, oblong; it crawls on its belly; progressing in its motion by means of internal muscles, so arranged as to give a fixed reliance on each in succession, as the advance forward is made. In certain situations where the ground is ill adapted to the animal's locomotion, a slimy juice is expelled from its body to smooth the path, or give it an additional hold. The skin is thick. It has four tentacula, capable of considerable extension; the larger or hinder pair are furnished with eyes at their summits; these, as well as the other pair, act as feelers to assist in avoiding danger, and it is said that if these be destroyed they will again form. In almost all particulars, except in not being furnished with a shell, they resemble the common garden-snail. This animal is so constantly under our convenient observation, that we need not describe it; this little creature, which we so cruelly crush beneath our feet, considering it as a common enemy, would well repay witnessing its interesting operations, and particularly to those who are studying conchology; here they can trace the various changes that take place, from the slight viscous covering with which the animal's body is first coated or merely glazed, till that substance becomes a firm shell adapted to the form and use of its inhabitant. And in what other animal can he watch the formation of the shell so easily? In the open fields these creatures perform useful purposes in conformity to the ends of their creation, by consuming the exuberant productions of nature, which, without its operation, would encumber the surface of the ground, and check the progress o future vegetation, &c. All these animals feed entirely on vegetables. We would bespeak some compassion towards these much persecuted creatures; but need we say more, than that, where great reproductive powers, or a strong tenacity of life, exist in any class of the Almighty's creatures, great ends are to be worked by their agency, however humble their powers may appear to man. And a conviction of this will be forced upon any one who will condescend to examine the good services these despised creatures render mankind.

MAY, 1846.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun: Rises—R. Sets—S. H. M.	Sun: Declination North ° ′	Moon: Rises—R. Sets—S. H. M.	Moon: Souths. H. M.	Moon: Age D.	High Water at London Bridge: Morning H. M.	High Water at London Bridge: Afternoon H. M.	Equation of Time. Subtract. H. M.	Day of the Year
1	F	*St. Philip & St. James*—Philip was born at Bethsaida. James the less, called also James the Just, was the son of Joseph, the carpenter, by a former wife, prior to his espousal with the Virgin Mary	4 35 R	15 3	Morning.	Afternoon	6	5 27	5 47	3 2	121
2	S		7 23 S	15 21	0 28 S	5 38	7	6 9	6 32	3 9	122
3	S	3RD SUNDAY AFTER EASTER.	4 31 R	15 39	0 57 S	6 22	☽	6 55	7 21	3 16	123
4	M	Jupiter sets at 8h. 3m. P.M.	7 26 S	15 56	1 24 S	7 5	9	7 52	8 27	3 22	124
5	Tu	*St. John*—Called the Evangelist from bringing glad tidings. St. John lived to the age of ninety, and died in the reign of Trajan——Hamburgh nearly destroyed by Fire, 3,000 houses burnt, 1842	4 28 R	16 13	1 46 S	7 48	10	9 4	9 40	3 28	125
6	W		7 29 S	16 30	2 9 S	8 32	11	10 15	10 48	3 33	126
7	Th	Earthquake in St. Domingo, 1842, 10,000 lives lost	4 24 R	16 47	2 31 S	9 16	12	11 18	11 48	3 38	127
8	F	Accident on Paris and Versailles Railway, 1842	7 32 S	17 4	2 54 S	10 3	13		0 12	3 42	128
9	S	Battle of Lodi, 1796	4 21 R	17 20	3 21 S	10 52	14	0 34	0 55	3 46	129
10	S	4TH SUNDAY AFTER EASTER	7 35 S	17 36	3 51 S	11 44	15	1 14	1 35	3 49	130
11	M	Mars sets at 11h. 8m. P.M.	4 17 R	17 51	4 23 S	Morning.	○	1 55	2 13	3 51	131
12	Tu	Grand Fancy Ball given by Queen Victoria, 1842	7 38 S	18 6	Afternoon.	0 39	17	2 34	2 53	3 53	132
13	W	Old May Day—Henri Quatre Assassinated, 1610	4 14 R	18 21	10 13 R	1 36	18	3 11	3 32	3 54	133
14	Th	The "ILLUSTRATED LONDON NEWS" first published, 1842—In a lecture on architecture, delivered at Liverpool, by Mr. G. Godwin, F.R.S., he remarked, that little was known of the private dwellings of ancient Greece, and said, an ILLUSTRATED LONDON NEWS of that period, or rather "Athenian News," would be exceedingly valuable	7 41 S	18 36	11 2 R	2 35	19	3 52	4 13	3 55	134
15	F		4 11 R	18 51	11 45 R	3 33	20	4 34	4 57	3 55	135
16	S		7 44 S	19 5		4 30	21	5 22	5 45	3 55	136
17	S	ROGATION SUNDAY—The fifth Sunday after Easter-day; and the Sunday before Holy Thursday, or the Ascension of Jesus Christ	4 8 R	19 18	Morning. 0 21 R	5 25	22	6 14	6 44	3 54	137
18	M		7 47 S	19 31	0 51 R	6 18	☾	7 14	7 47	3 52	138
19	Tu	*St. Dunstan*—Successively Bishop of Worcester, London, and Canterbury; and what was, perhaps, very valuable in his day, an excellent blacksmith	4 5 R	19 45	1 18 R	7 8	24	8 23	9 1	3 50	139
20	W		7 49 S	19 58	1 41 R	7 59	25	9 36	10 9	3 47	140
21	Th	*Ascension Day—Holy Thursday*—The Thursday in Rogation week; being the day on which our Saviour's ascension is commemorated. At the Reformation processions on this day were abolished	4 3 R	20 10	2 8 R	8 49	26	10 45	11 18	3 44	141
22	F		7 52 S	20 22	2 36 R	9 40	27	11 46		3 40	142
23	S	Francis shot at Queen Victoria, 1842	4 0 R	20 34	3 8 R	10 31	28	0 16	0 42	3 35	143
24	S	SUN. AFT. ASCENSION—Birth of Queen Victoria	7 55 S	20 45	3 41 R	11 22	29	1 6	1 33	3 30	144
25	M	Mercury rises at 3h. 18m. A.M.	3 58 R	20 56	4 14 R	Afternoon	●	1 55	2 17	3 25	145
26	Tu	*St. Augustin*—Commissioned by Pope Gregory to convert the Saxons. Created Archbishop of Canterbury in the year 596; died, 610	7 58 S	21 7	Afternoon.	1 5	1	2 36	2 57	3 19	146
27	W		3 56 R	21 17	9 49 S	1 56	2	3 17	3 35	3 12	147
28	Th	Jupiter rises at 3h. 33m. A.M.	8 0 S	21 27	10 28 S	2 45	3	3 53	4 10	3 5	148
29	F	Restoration of King Charles II.	3 54 R	21 36	10 59 S	3 31	4	4 29	4 48	2 58	149
30	S	Pitt born, 1759—Pope died, 1744	8 2 S	21 46	11 26 S	4 17	5	5 5	5 24	2 50	150
31	S	PENTECOST, OR WHIT SUNDAY	3 52 R	21 54	11 50 S	5 0	6	5 44	6 5	2 42	151

Times of changes of the Moon, and when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth, in each Lunation.

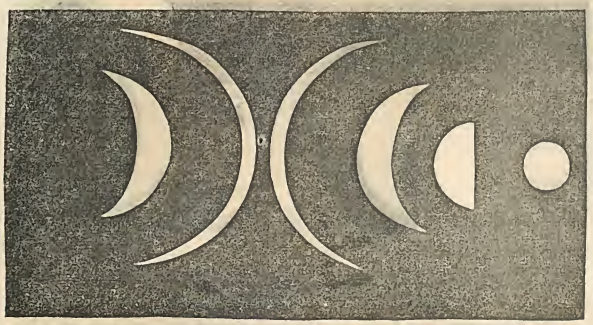
First Quarter	3d.	11h.	52m.	A.M.
Full Moon	11	6	6	,,
Third Quarter	18	1	27	P.M.
New Moon	25	4	44	A.M.
Apogee	3	8		,,
Perigee	15	7		,,
Apogee	31	3		,,

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the M.	Mercury: Right Ascension.	Mercury: Declination North.	Venus: Right Ascension.	Venus: Declination	Mars: Right Ascension.	Mars: Declination North.	Jupiter: Right Ascension.	Jupiter: Declination North.	Saturn: Right Ascension.	Saturn: Declination South.	Uranus: Right Ascension	Uranus: Declination North.
1	1h. 27m.	7° 25′	23h. 42m.	2° 6′ s	5h. 32m.	24° 29′	3h. 13m.	17° 6′	22h. 8m.	12° 51′	0h. 45m.	4° 7′
6	1 31	6 43	0 0	0 46 s	5 46	24 37	3 18	17 25	22 9	12 45	0 46	4 13
11	1 40	7 2	0 18	0 42 N	6 0	24 40	3 22	17 44	22 10	12 41	0 47	4 19
16	1 55	8 14	0 36	2 18 N	6 14	24 38	3 27	18 2	22 11	12 37	0 48	4 24
21	2 15	10 8	0 55	3 59 N	6 28	24 31	3 32	18 19	22 12	12 34	0 49	4 29
26	2 40	12 33	1 15	5 44 N	6 42	24 20	3 37	18 36	22 13	12 32	0 49	4 34

MAY.

The planet Venus always appears in that quarter of the Heavens which the Sun has just deserted, or where he is just about to appear; she is, nevertheless, one of the brightest and the most beautiful of all the objects in the Heavens—indeed, she ranks next in splendour to the Moon herself. A slight attention to her position relatively to the fixed Stars, continued for a few days, suffices to show that she changes her place with considerable rapidity. If we observe her in the evening we shall soon find that her greatest angular distance from the Sun, or her elongation, never exceeds 47deg., being at this time from 3 to 4 hours visible in the evening after him, and in this case she is called the Evening Star; the time which she continues above the horizon after sun-set gradually diminishes, till at last she sets at the same time as the Sun. A few days after this time she will rise a little before the Sun in the East, and is called the Morning Star; at first by only a few minutes, but every succeeding morning somewhat earlier, till her angular distance from the Sun is about 46°, and at this time she rises from 3 to 4 hours before the Sun. This distance then becomes less till she appears so near the Sun as to be again lost in his rays. A few days after this she again re-appears as an evening Star, so that in no case can the Planet be seen at midnight. When she is E. of the Sun, after having been for some time visible in the evening, she begins to approach the Sun, and she appears through the telescope as a fine luminous crescent, the horns of which are turned towards the East, and which becomes narrower, and longer, as her angular distance from the Sun diminishes; at the time that she and the Sun are in, above, or below, the imaginary straight line joining the Sun and the Earth, or at about the time they set together, she is at her inferior conjunction with the Sun, and her apparent diameter is the largest; when she rises a little before the Sun the horns of her crescent are turned towards the West; she then exhibits successively Moon-like phases, passing to the half-circle, and to that form, greater than a half-circle, called gibbous; when about to present a small full orb, she is lost in the Sun's rays. These different appearances are represented in the accompanying engraving:



The first appearance on the left hand is that at the time of her greatest brilliancy on January 26th; the next is that a few days before March 2d, at which time she is in inferior conjunction with the Sun, and invisible to us as we are looking at her un-illuminated side, and the third position is that a few days after March 2; on April 7th she has the appearance represented at the fourth from the left hand, being exactly the same as that at the first position, except that the horns are turned the contrary way, and she is a second time at her greatest brilliancy. On the 11th day of the present month she will have the appearance as represented at the extreme right position but one, being then at her greatest angular distance from the Sun West; and, on December 13th, she will be a full round small orb as represented at the extreme right. At every intermediate time between these times she will be of an intermediate form. The several appearances above are laid down on the same scale. During these changes it is evident that there are remarkable alterations of the Planet's diameter and brilliancy, and it is plain that she is not at her greatest brilliancy when most of her illuminated disc is seen; in fact her brightness, as seen from the Earth, depends on two causes; first upon her distance from the Earth; and secondly upon the greater or less magnitude of that portion of her enlightened hemisphere which is turned towards the Earth. These causes tend to render her brightest twice in each revolution, at times, when her elongation is about 40°, and at these times she is visible to the naked eye at broad daylight, and when the Sun is below the horizon, she occasions a sensible shadow. At her greatest elongation, she appears stationary with respect to the Sun for some time, and at certain other times she appears stationary with respect to the fixed stars. The times at which these several phenomena occur, are mentioned under the head of the Astronomical occurrences in each month.

It is stated that spots have at times been seen on the Planet's face, and such were seen at Rome, in 1840 and 1841, by Francesco de Vico, Director of the Observatory at Rome, and from observations on them he deduced the time of rotation on her axis to be 23h. 21m. 22s. When Venus is in the straight line joining the centre of the Sun and the Earth, she is seen to pass over the Sun; and such a phenomenon can be seen from many parts of the Earth, depending on the distance that Venus is from the Earth and from the Sun, and it serves to determine these distances, and upon this our knowledge of the distances of the whole solar system depends. It is unfortunate that so useful a phenomenon should occur so seldom. The last was in 1769, from which the distance of the Sun from the Earth was satisfactorily obtained. There will not be another till 1874, and which will not be visible in England; there will be one which will be visible in England, in 1882,* on December 8, and the next will be in 2004.

The planets are all solid spherical bodies, therefore that hemisphere, or half only, which is turned towards the Sun, can be illuminated at one time; and only one hemisphere can be turned towards the Earth at one time, and therefore seen from the Earth.

If the half on which we look, coincided always with the half illuminated by the Sun, it is plain that the whole illuminated hemisphere would be seen, and if it does not, then it is equally plain only a part of it would be visible at such times; the latter is evidently the case with Venus, as indeed it is with every planet, but there is a marked difference in their appearances, depending on their distances from the Sun, being greater or less than that of the Earth from the Sun.

Those Planets whose distance from the Sun is greater than that of the Earth, are called Superior Planets, and those whose distance is less, are called Inferior Planets; the orbits of the former, or the lines described by their revolution round the Sun, are all greater, and the orbits of the latter are all less than the orbit of the Earth; and consequently, in the case of the Superior Planets, the greater portion of their enlightened sides will be always turned towards us; and in the case of the Inferior Planets sometimes the whole of their unenlightened discs, and sometimes the whole of their enlightened hemispheres are turned towards us—their discs passing in the intermediate period through all those varieties of appearance represented above. Hence the orbit of Venus, from this cause, and also from the circumstance of the Planet being seen at times to pass across the Sun's disc, must be within that of the Earth, and, therefore, her distance from the Sun must be less than the Earth's distance from the Sun; in fact, her distance is about sixty-eight millions of miles, whilst that of the Earth is ninety-five millions of miles.

Venus shines with a brilliant white colour, and in some situations it is so powerful as to cause a sensible shadow. Her diameter is about 7700 miles. The Sun, as viewed from Venus, must appear nearly twice as large as he does to us, and, therefore, the proportion of light and heat which she receives from the Sun, is nearly double that received on the Earth.

At the beginning of the month, Mercury is exactly midway between γ Pegasi and α Ceti; and at this time the Planet moves slowly. On the 15th day he is about 13 degrees South of α Arietis, and at the end of the month he is between α Ceti and the Pleiades, at about 8 degrees from the latter, and he now rapidly changes his place.

Venus will be readily distinguished by her exceeding brightness; on the first day she rises in the E. at 3h. 7m. A.M., and on the last day she rises in the E.N.E. at 2h. 16m. A.M.

* It was inadvertently stated in the Almanack of last year, that there would not be one between 1874 and 2004.

ASTRONOMICAL OCCURRENCES IN MAY.

Planets.

Names	Time of passing the Meridian or Southing, on the 15th day	When near the Moon	Angular Distance from the Moon, North or South
	H. M.	D. H.	DEG.
Mercury - - -	10 20 A.M.		
Venus - - -	9 1 A.M.	21 2	4 South
Mars - - -	2 40 P.M.	28 5 A.M	6 North
Jupiter - - -	11 55 A.M.	24 2 P.M.	1 North
Saturn - - -	6 41 A.M.		
Uranus - - -	9 17 A.M.	21 11 A.M.	3 South

Occultation of Stars by the Moon.

Names of the Stars	Times of disappearance and re-appearance of the Star	At the dark or bright limb of the Moon
	D. H. M.	
C Sextantes	4 9 41 P.M.	Dark
	4 10 53 „	Bright
58 Virginis	8 10 33 P.M.	Dark
	8 11 7 „	Bright
β^1 Scorpii	12 0 24 A.M.	Bright
	12 1 18 „	Dark

May 5th, 7 a.m., Mercury the farthest from the Sun.
May 11th, 4 p.m., Venus' elongation the greatest W. 46 deg.—*(See above.)*
May 17th, 1 a.m., Mercury at the greatest W. elongation, being 25 deg. W.—*(See September.)*
Jupiter's Satellites are not visible during this month, Jupiter being too near to the Sun.

THE YOUNG MAN ABROAD—TO "OBSERVE THE RIGHTS OF MAY."

MAY is, throughout, a month of out-door rejoicing; and, as its festivities are inspired by the gay face of Nature, they are as old as any we have on record. Mr. Borlase says: "May customs are nothing more than a gratulation of the Spring, to testify universal joy at the revival of vegetation." And, Mr. Douce remarks: "there can be no doubt that the Queen of May is the legitimate representative of the Goddess Flora, in the Roman festival." In Scotland, on May-day, is held a rural sacrifice called the Baltein, or Fire of Baal—the only word in Gaelic for a globe; this festival being, probably, in honour of the return of the Sun, in his apparent annual course:—

All hail to thee, thou first of May,
Sacred to wonted sport and play,
To wine and jest, and dance, and song,
And mirth that lasts the whole day long.

In the days of "Merry England," all ranks of people—royal and noble, as well as the vulgar—went out *Maying*, *i.e.* gathering May, on the first of May: who does not remember Herrick's lyric "To Corinna, to go a Maying." The universality of the custom—the multitudes roaming in the fields on May morning, and the towns and villages subsequently bedecked with evergreens, are thus told:—

Come, my Corinna, come; and, coming, mark
How each field turns a street, each street a park,
Made green, and trimm'd with trees; see how
Devotion gives each house a bough,
Or branch; each porch, each door, ere this,
An ark, a tabernacle is,
Made up of whitethorn neatly interwove;
As if here were those cooler shades of love.

Our artist has picturesquely illustrated the "rites of May"—where the youthful swain is adorning the brow of his fair companion with a garland of flowers, and is about to lead her forth to the sports of the Morris-dance and May-pole, where too are Robin Hood, Friar Tuck, and Maid Marian, from the rustic chivalry of ages long past: the Morris-dance originated from the Moors, (*Morisco*); and the Marian, perhaps, from Morion, a head-piece, because the head was gaily dressed.

Nor was this merely a rustic sport, for it was equally enjoyed by those "in populous city pent." In "jolly old London," on May-day, the doors were decorated with flowering branches, and every hat was decked with hawthorn, brought in triumph from the neighbouring fields. Then, May-poles were set up in various parts of London: Chaucer mentions the pole or *shaft*, in Leadenhall-street, higher than the steeple of the church of St. Andrew-under-shaft. Beaumont and Fletcher allude to the May-pole nearly on the site of the church of St. Mary-le-Strand; and its successor, when removed, was used for a telescope-stand in Essex; it had two gilt balls and a vane, on the summit, and was decorated on festival-days, with garlands of flowers. Another pole must have been set up in May Fair, just upon the verge of Hyde Park. The Puritans fought a stubborn battle with the May-poles—as "heathenish vanities of superstition and wickedness:"—

Alas! poor May-poles! what should be the cause
That you were almost banished from the earth?
Who never were rebellious to the lawes:
Your greatest crime was honest, harmlesse mirth.

At the Restoration, May-poles were permitted to be erected again; though few held up their heads after the *coup fanatique*. *They* were condemned as pagan; but, on the observance of May Day, there could scarcely be any difference of opinion. Even the grave old Chronicler Stowe, talks of rejoicing the spirits with the beauty and savonry of sweet flowers, and with the notes of birds—*praising* God *in their kind*."

May has, indeed, been a "feast of the poets." Who does not remember Milton's glorious invocation to "flowery May," and "bounteous May," Then, too, the festive muse of Moore:

Of all the fair months that round the Sun
In light-linked dance their circle run,
Sweet May! sweet May! thou'rt dear to me.

Even, the gentle Gray is roused to sing "We frolic while 'tis May." Yet, those who can "suck melancholy from a song" may find it in this month, and its frail flowers. Ben Jonson, in his exquisite ode "To the Memory of a Youth," after the long-standing oak, says:—

A lillie of a day
Is fairer farre in May,
Although it fall and die that night:—
It was the plant and flower of light.

Among the superstitions of the month, it was a bad omen to be married in it—a notion as old as Ovid. On Old May Day, 1610, Henry IV. was assassinated by Ravaillac—a tragedy of such eventful consequences, that it must have added to the *fatalities* of the month.

Holy Thursday (Ascension Day), is still set apart for parochial perambulations, and beating bounds—a custom traceable to the pagan Terminus (Lat. bound), who was the guardian of fields and landmarks, and the keeper-up of friendship and peace among men; the procession was formerly headed by the Bishop or Clergy, who sang Litanies in the fields, &c. A Homily was formerly set forth, for this day; for which, also, the Injunctions of Queen Elizabeth, in 1599, declared that a proper service should be provided.

Restoration Day observances are now but rare; though, formerly, the statues of Charles I. and II. were dressed with oak-branches. as was the tomb of the preserver of Charles II., at St. Giles's church, London. At Newcastle, it is called "Barge Day," there being on the Tyne a Corporation procession, similar to that on the Thames, on Lord Mayor's Day.

Whit Sunday, or Pentecost, or *Whiten-Sunday*, was named from its being one of the stated times for baptism in the ancient church, when those that were baptised put on *white* garments, as types of that spiritual purity which they had received. In Catholic countries, the priests, on this day, cast flowers from the upper ambulatories of their churches, upon the congregation of the faithful assembled in the nave below.

I. T.

MAY.

THE arrivals of birds this month are but few; we may expect the fly catcher and the sedge warbler, and the females of the previous arrivals; the females usually appearing a week or more later than the males. During the month the blackcap, willow wren, and generally the Summer warblers, will be in full song during the day, and the nightingale at night. Most birds are busy in nest building or in hatching.

The *Spotted Fly Catcher* is in length nearly five inches and three quarters; bill dusky, the base of it whitish, and beset with short bristles; head and back light brown; wings dusky, edged with white; the breast and belly white; the throat, and sides under the wings, tinged with red; tail dusky; legs black.

The *Sedge Warbler* is about five inches and a half in length, and it can be distinguished, by a white streak extending from the gape towards the eye, but before it reaches that organ dividing itself into two, so that the eye is between the two divisions. This is always seen in the species, and it is a ready means of distinction.

Insects, during this month, become very numerous; moths and butterflies are very abundant; glow-worms shine; bees swarm, dragon flies; and beetles appear, &c.

THE DRAGON FLY—LIBELLULA VIRGO.

Dragon flies, or those insects which are commonly called horse-stingers (but why such a name should be applied we know not, as they are perfectly harmless), appear in this month; and, from their elegant forms, beautiful colours, the elegance and delicacy of their wings, which are as transparent as gauze, often ornamented with coloured spots, exhibiting, when viewed, at different inclinations of the sun's rays, all the tints of the rainbow, always attract a good deal of attention. Indeed, nothing can be more beautiful than to watch these brilliant insects, darting backwards and forwards in a continual flight after flies, moths, butterflies, and insects. Their mouth is capable of much distension; and, from their great activity, an insect when observed has but little chance of escape; they, in their turn, are devoured by birds.

There are many species of dragon flies; but, in a popular work of this kind, we have only room to mention a few. The most remarkable is that called Libellula Varia; it may be seen about the decline of Summer, and is of singular beauty; its length is three inches; the wings, when expanded, are four inches from tip to tip; they are varied with yellow and brown, the tip with a white spot terminated by a black one. The head is very large; neck slender; the eyes occupy by far the greater part of the head, and they are of a blue-grey with a varying lustre. The front is greenish yellow; the body is long, slender, and black, with rich variations of bright blue and grass green. The wings are perfectly transparent, and vary in appearance according to the inflections of light. This insect during the middle of the day is extremely rapid in its motions, darting off on the slightest alarm from the spot on which it had settled. During the early hours of the morning and late in the evening, it is easily taken: at such times it sits with its wings spread, and it will suffer itself to be readily seized by them.

Libellula Grandis is the largest found in Britain, and is not inferior in bulk to any insect which this country produces. The fore-part of the head is yellow, eyes brown and large; abdomen reddish, often spotted with white and black upon the top and bottom; wings more or less of a yellow complexion, and distinguished by a brown spot on the outer edges. The colours of this insect vanish when dead.

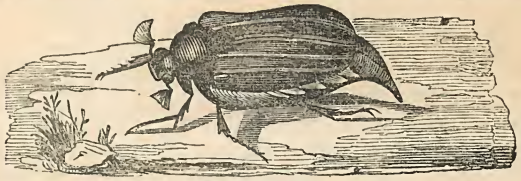
Libellula Virgo—*(See the engraving above)*. This is one of the most elegant of the European insects. Its body is slender, long and cylindrical, which, as well as the head, is usually either of a bright but deep golden-green, or of a deep gilded blue; wings transparent at the base and tips, but are each marked in the middle by a very large oval patch of dark violet blue; this insect is common about waters.

Libellula Puella. A small but elegant species, wings colourless but transparent, and each marked near the tip with a small oblong, black spot. From the brilliancy and richness of its colours, it has been called the King's fisher. There are of this, as well as of the preceding one, different varieties according to the difference of spots and colours; but it is generally of a bright and beautiful sky blue, variegated with black bars on the joints. The eyes are round, protuberant, and placed on each side of the head at a distance from one another.

The addresses of the male of these species to the female seem carried on in a rough manner. He hovers about on the wing till the object of his amours makes her appearance; he then watches an opportunity of seizing her by the neck, with those pincers with which his tail is armed. In this way he flies through the air, till the female, yielding either to inclination or necessity, forms her body into a circle, adapted to the purpose of nature; consequently, two of these insects are frequently seen coupled in the air, exhibiting the form of a ring. The female, at a proper period, retires to some stagnant water, and deposits the eggs, which are of a white colour, resembling those produced by the common blow fly. The larvæ are soon hatched, and the insect retains its aquatic habits nearly a year before it attains its full size; at which time the winged insect appears. Its life in this state is short in comparison with that which it passed in its aquatic form, the frosts of

THE DRAGON FLY—LIBELLULA PUELLA.

Autumn destroying all those that have not been devoured by birds. Many persons would scarcely believe that these brilliant insects, flying with such rapidity in the pursuit of other insects, had been inhabitants of the water for a year. And it is impossible not to be struck with wonder in contemplating their changes, for while living in the water, they would perish by a long exposure to the air; in their winged state, they would be destroyed by submersion under the water—an instance not less striking than that of the butterfly in point of form, which exhibiting one and the same animal appears in different periods of its existence.



THE COCKCHAFFER.

This insect is very abundant in our island, and it has a variety of names; for instance, as the brown tree beetle, blind beetle, May bug, chaffer, May bob, or oak web, jack horner, geffry cock, acre bob, &c., as it is variously termed in different parts of the country.

Its colour is brown; thorax hairy; tail inflected; a triangular white spot at each incisure of the abdomen. The larvæ is soft and gray, with the head and legs protected by a shelly covering of a yellow, brown colour. While in the larvæ state, which continues for a space of two or three years, it devours the roots of corn, grass, and other vegetables. They are much sought after by crows, rooks, and other birds, as well as animals. It is the larvæ of this insect that is so frequently turned up by ploughing, and in quest of which crows are often seen following the tracks of the plough-share. Children are also employed to follow the plough and collect the white worms, as they are called.

The eggs are laid in small detached heaps beneath the surface of some clod; and the young, when first hatched, are scarcely more than one eighth of an inch in length, gradually increasing in their growth, occasionally changing their skins, until they are of the size of two inches or more. At this time they descend to the depth of two feet, where they construct an oval cell, very smooth in the inside; and, after a certain time, divest themselves of their last skin, and appear in the chrysalis form; in which they continue till the succeeding Spring, when they assume the perfect beetle; but remain for a considerable time in a weak state, not venturing out till the fine days of May or the beginning of June; at which time the beetle emerges from its retirement and commits its depredations on the leaves of trees &c.; breeds and deposits its eggs: after which its life is short. It is eagerly sought after by swine, bats, crows, and many kinds of birds.

We cannot conclude this account without expressing a hope that when it is advisable to destroy these insects, that means should be adopted to do it in the quickest possible way; and that children should be checked from the very cruel practice of running a pin through the curious pointed extremity of its body, round which the beetle whirls in its endeavours to escape from the torture inflicted upon it.

The vegetable world is in a very active state; during the month, the following plants will be in flower:—Common privet in thickets; speedwell, in pastures; common butter-wort in moist heaths; holly tree in hedges; cream-coloured violet on heaths; heartsease in corn-fields; honeysuckle in thickets; buckthorn in hedges; lesser periwinkle in thickets; greater periwinkle in moist places; narcissus in sandy pastures; hare-bell in thickets; lily of the valley on shady hills; common lily of the valley in thickets; barberry in hedges; cultivated cherry-tree, apple, bramble, pheasant's eye, crowfoot, butter-cup, candy-tuft; bryony, Scotch fir-tree, willow &c., &c.

JUNE, 1846.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination North ° ′	Moon. Rises—R. Sets—S. H. M	Moon. Souths. H. M.	Moon. Age D.	High Water at London Bridge. Morning. H. M.	High Water at London Bridge. Afternoon H. M.	Equation of Time Subtract. M. S.	Day of the Year
1	M	Whit Monday.—*Nicomede*—He was a pupil of	3 51 R	22 3	Morning.	Afternoon	7	6 26	6 50	2 33	152
2	Tu	St. Peter, and was discovered to be a Christian by his burrying Felicula, a martyr. He was beaten to death with leaden plummets on account of	8 5 S	22 11	0 13 S	6 25	☽	7 12	7 39	2 24	153
3	W	his religion, in the reign of Domitian——Oxford Trinity Term begins.	3 50 R	22 18	0 34 S	7 9	9	8 8	8 42	2 14	154
4	Th	Saturn rises at 0h. 25m. A.M. in S.E.	8 7 S	22 26	0 57 S	7 54	10	9 15	9 46	2 5	155
5	F	*Boniface.*—In 745 St. Boniface was created Bishop	3 49 R	22 33	1 21 S	8 41	11	10 16	10 46	1 55	156
6	S	of Mentz. He was a Saxon Presbyter, born in England, and at first called Winefrid; he was a friend and admirer of the Venerable Bede.	8 9 S	22 39	1 47 S	9 31	12	11 16	11 48	1 44	157
7	S	Trinity Sunday is the festival of the Christian	3 47 R	22 45	2 20 S	10 25	13		0 12	1 33	158
8	M	Church, observed on the Sunday next after Whit-Sunday, in honour of the Holy Trinity. The observation of this festival was first enjoined in the	8 11 S	22 51	2 58 S	11 22	14	0 38	1 0	1 22	159
9	Tu	Council of Arles, A.D. 1260.	3 46 R	22 56	3 18 S	Morning.	○	1 25	1 47	1 11	160
10	W	Oxford shot at the Queen, 1840	8 12 S	23 1	Afternoon.	0 21	16	2 11	2 34	0 59	161
11	Th	*Corpus Christi*—A festival of the Romish Church,	3 45 R	23 5	9 42 R	1 21	17	2 57	3 18	0 48	162
12	F	held on the Thursday after Trinity Sunday. It celebrates, as the name indicates, the doctrine of the transubstantiation; and is observed in Catholic	8 14 S	23 9	10 22 R	2 20	18	3 40	4 3	0 36	163
13	S	countries with considerable ceremony.—*St. Barnabas.*	3 45 R	23 13	10 53 R	3 18	19	4 25	4 50	0 23	164
14	S	1st Sunday after Trinity	8 16 S	23 16	11 23 R	4 13	20	5 15	5 41	0 11	165
15	M	Magna Charta signed, 1215	3 44 R	23 19	11 48 R	5 6	21	6 5	6 33	Add.	166
16	Tu	Duke of Marlborough died, 1722, aged 72	8 16 S	23 22	Morning	5 57	☾	7 0	7 30	0 14	167
17	W	Cobbett died, 1835, aged 73	3 44 R	23 24	0 15 R	6 47	23	8 1	8 34	0 27	168
18	Th	Battle of Waterloo, 1815. Cost £13,000,000	8 17 S	23 25	0 41 R	7 37	24	9 8	9 41	0 40	169
19	F	Sir Joseph Banks died, 1820	3 44 R	23 26	1 11 R	8 27	25	10 13	10 49	0 53	170
20	S	Accession of Queen Victoria, 1837	8 18 S	23 27	1 42 R	9 17	26	11 22	11 53	1 6	171
21	S	2nd Sunday after Trinity—Longest day	3 44 R	23 27	2 19 R	10 8	27		0 23	1 19	172
22	M	Battle of Vittoria, 1813	8 19 S	23 27	3 1 R	10 59	28	0 48	1 13	1 32	173
23	Tu	Akenside died, 1770	3 45 R	23 27	3 45 R	11 50	●	1 38	1 58	1 45	174
24	W	*St. John Baptist*—Midsummer day	8 19 S	23 26	Afternoon.	Afternoon	1	2 21	2 42	1 58	175
25	Th	No real night till the middle of July	3 46 R	23 25	9 0 S	1 26	2	3 2	3 19	2 11	176
26	F	George IV. died, 1830	8 18 S	23 23	9 29 S	2 12	3	3 36	3 55	2 24	177
27	S	Saturn rises at 10h. 54m. P.M. in S.E.	3 46 R	23 21	9 54 S	2 56	4	4 11	4 29	2 37	178
28	S	3rd Sun. after Trinity—Queen Vic. cr. 1838	8 18 S	23 18	10 17 S	3 39	5	4 46	5 3	2 49	179
29	M	*St. Peter*—A high festival of the Roman Catholic	3 47 R	23 15	10 41 S	4 22	6	5 20	5 39	3 1	180
30	Tu	Church, and a holiday of the Church of England. It is celebrated at Rome with illuminations and magnificent ceremonials.	8 18 S	23 12	11 1 S	5 4	7	5 58	6 16	3 13	181

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.					Days of the M.	Mercury. Right Ascension.	Mercury. Declination North.	Venus. Right Ascension.	Venus. Declination North.	Mars. Right Ascension.	Mars. Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
First Quarter	2d.	5h.	30m.	A.M.	1	3h. 15m.	15° 53′	1h. 39m.	7° 53′	6h. 58m.	24° 0′	3h. 43m.	18° 56′	22h. 13m.	12° 30′	0h. 50m.	4° 39′
Full Moon	9	3	36	P.M.	6	3 51	18 46	1 59	9 40	7 12	23 39	3 47	19 11	22 13	12 30	0 51	4 43
Third Quarter	16	6	38	A.M.	11	4 31	21 28	2 20	11 26	7 26	23 13	3 52	19 26	22 14	12 31	0 51	4 47
New Moon	23	5	48	P.M.	16	5 16	23 33	2 42	13 9	7 39	22 44	3 57	19 41	22 13	12 32	0 52	4 50
Perigee	12	1		A.M.	21	6 4	24 41	3 4	14 48	7 53	22 10	4 1	19 54	22 13	12 34	0 52	4 53
Apogee	27	8		P.M.	26	6 51	24 39	3 26	16 21	8 6	21 32	4 6	20 7	22 13	12 37	0 53	4 55

JUNE.

When the Sun is more than 33 minutes of space below the horizon, no rays of light from him can reach our eyes, but they pass over our head, and illuminate the heavens This illumination is called twilight, and continues, it is generally supposed, till the Sun is more than 18 degs. below the horizon , now the Sun is never more than 18 degs. below the horizon in England, from May 23rd to July 20th ; and, consequently, no absolute darkness takes place between these times. At all other times of the year the Sun sinks more than 18 degs. below the horizon, and the evening twilight ends at that time, and the morning twilight begins when he is at the same distance below the E. horizon. It is doubly useful, since it shortens the night, and prevents at the same time the sudden transition from light to darkness.

Next to the Sun, the Moon is the most remarkable of the heavenly bodies. As seen by the naked eye certain portions of the Moon appear darker than the rest, and viewed through a telescope the whole of her surface is irregularly marked, as represented in the following drawing.

TELESCOPIC APPEARANCE OF THE MOON IN HER MEAN LIBRATION.

Of these marks there are two distant classes ; those which appear precisely the same with respect to forms and intensity of light and shade at all ages of the Moon, and those which are variable in appearance. The former class of marks appears to result from some peculiarity in the surface of the Moon, absorbing, at some parts, a greater or less number of the Sun's rays than at other parts ; and they are of different colours ; some parts are grey, others of a light green, and there are some streaks of a dark colour.

The latter class appears to consist of hills, mountains, bands of light, valleys, and deep cavities.

That these great inequalities on the surface of the Moon exist, is proved by looking at her through a telescope at any time when she is not full, and the best time to study these interesting appearances, is when the Moon is either horned or gibbous: the edge about the confines of the illuminated part is then jagged and uneven, and the Sun shining on the tops of the hills, before his rays can fall on the intermediate plains, form beautiful islands of light in the dark part of the Moon ; these may be seen well about the fourth day after new Moon ; as are exhibited in a few cases in the drawing in February. At this time, too, may be perceived other little spaces which join the enlightened surface, but run into the dark part, which gradually change their form, till at last they come wholly within the illuminated part, having no darkness around them at all. Afterwards many more such shining spaces arise by degrees, and appear as before, within the dark side of the Moon, which, before they draw near to the illuminated portion, are invisible, being in shadow. During the time that the phases are decreasing, the reverse takes place. Those bright spaces which joined the illuminated part recede gradually from it, and remain visible after they are quite separated from the limits of light and darkness. This could not possibly be the case, unless the shining parts were at some distance from the surface of the Moon, so that the Sun can shine on the tops of the mountains, before he can on the plains below.

These appearances render it certain that the surface of the Moon is covered with high mountains, and with masses of unknown matter ; but which has the property of reflecting the Sun's light. By means of the shadows of the lunar mountains, their heights have been ascertained ; some of which are nearly 18,000 feet high.

Numerous cavities also appear in every part of her surface—some of which are upwards of 3 miles in depth, and from 20 to 30 miles in circumference ; in some of these enormous caverns, a single mountain is observed to rise from the centre —*(See August)*. In looking at the Moon the mountains can be distinguished from the valleys, by the shadows of the former being *from* the Sun, and by those parts of the valleys being in shade which are *towards* the Sun.

The motion of the Moon is remarkable. In the course of a few hours she sensibly approaches to, or separates herself from, the Stars that are near her ; she moves over a space nearly equal to her own diameter in an hour, and completes a whole circuit in about twenty-seven days.

The marks on the Moon present no changes of form, and retain towards each other the same relative situations, and also, with slight variations, to the apparent centre of the Moon. The Moon, therefore, at all times, presents very nearly the same half towards the Earth ; and, if this be the case, then the Moon must turn upon her axis in the same time as she takes to revolve round the Earth. The Moon is carried along by the Earth in its revolution round the Sun ; and, while the latter takes a year to perform its revolution, the Moon performs thirteen and a half of her revolutions round the Earth. The extent of the Moon's visible hemisphere is not always the same ; small segments on the East and West sides alternately appear and disappear ; or, in other words, a little more of her disc is seen sometimes on the West side, and sometimes on the East side, than at other times, which variations are called libration in longitude. In our engraving she is represented at her mean libration.

With reference to the Sun, the Moon has a day whose length is nearly fifteen of our days, and a night of the same duration.

With reference to the Earth, one half of the Moon is so placed, that the Earth cannot be seen from her at all ; and the other half can see it for half a month at one time.

With reference to the Sun and the Earth conjointly, one half of the Moon has no darkness at all, while the other half has half a month of light, and half a month of darkness, alternately ; that which has no darkness at all ; being illuminated by the Earth shine during its long night.

Nothing indicative of the presence of water can be seen on the Moon's surface, although the dark spots on her surface were formerly supposed to be water. With a good telescope, elevations and cavities are distinctly visible in them ; in fact, she appears to be without water, clouds, or vapour, and, consequently, without sound ; her surface appears to consist of desolate wastes. The application of Lord Rosse's magnificent telescope to the Moon, may increase our knowledge on the constitution of her surface.

The following is the position of the Constellations that are rising; on the meridian ; and setting on the 1st day at midnight :—

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
A part of Perseus in N.N.E.	A part of Auriga 15° above N. horizon	Gemini in N.W. by N.
Pisces in N.E. by E.	Camelopardalus 30° above N. horizon	Cancer in N.W.
Pegasus in E.	Draco, between Polaris and Zenith	Leo in W.N.W.
Aquarius in E. by S.	Herculus 60° above S. horizon	Sextans in W.
A part of Capricornus in S.E. by E.	Ophiuchus 50° above S. horizon	Corvus in S.W. by W.
A part of Sagittarius in S.E. by S.	Scorpio 20° above S. horizon	Centaurus in S W. by S. Lupus in S. by W.

ASTRONOMICAL OCCURRENCES IN JUNE.

Planets.

Names.	Time of passing the Meridian or Southing, on the 15th day.	When near the Moon.	Distance from the Moon North or South.
	H. M.	D. H.	DEG.
Mercury . . .	11 33 A.M.	24 4 A.M.	6 North
Venus . . .	9 4 „	20 4 „	2 South
Mars . . .	2 3 P.M.	25 2 „	6 North
Jupiter . . .	10 22 A.M.	21 8 „	2 North
Saturn . . .	4 41 „	14 6 P.M.	6 South
Uranus . . .	7 19 „	17 6 „	3 South

Occultations of Stars by the Moon.

Name of the Star.	Time of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
	D. H. M.	
c' Capricorni . {	14 1 17 A.M.	Bright
	14 1 52 „	Dark

June 3d. 1h. A.M., Venus at the greatest distance from the Sun.
June 18th. 7h. A.M., Mercury at the least distance from the Sun.
June 20th. 0h. (noon), Mercury in superior conjunction with the Sun—*(See September.)*
June 21st. 8h. 32m. P.M., Sun enters Cancer ; Summer commences.

THE YEAR AND HIS BRIDE, AS KING AND QUEEN OF THE FEAST OF SHEEPSHEARING, PRESIDING AT THE SPORT OF WRESTLING.

June bears distinct evidence of its pagan nomenclature, from Juno. Our Saxon ancestors named it, more reasonably, *Weyd-Monath*; "because," says Verstegan, "their beasts did then weyd in the meddowes, that is to say, goe to feed there." It was afterwards called *Sere-Monath*, or dry month.

Whitsuntide, was formerly kept with many feasts called *Ales*, because much ale was then drunk: thus there were bride-ales, clerk-ales, give-ales, lamb-ales, leet-ales, Midsummer-ales, Scot-ales, and several more. Stool-ball and barley-break were, also, Whitsun sports: in "ancient tymes," too, Whitsun plays were acted: at Chester, they were twenty-five in number, and were performed for above three centuries, annually. The Morris Dance was another Whitsun sport; and Fairs were common, more especially in the neighbourhood of London. Aubrey, in his account of North Wilts, has left us the following account of Whitsun Ales (temp. 1711): "There were no rates for the poor in my grandfather's days; but, for Kington St. Michael (no small parish) the Church Ale of Whitsuntide did the business. In every parish is (or was) a church-house, to which belonged spits, crocks, &c., for dressing provision. Here the housekeepers met and were merry, and gave their charity. The young people were there, too, and had dancing, bowling, shooting at butts, &c.; the ancients sitting gravely by, and looking on."—(*See Britton's Memoir of Aubrey*, 1845.) At this day, Whitsuntide is the usual time for "making rates."

Sir John Suckling, in his "Ballad upon a Wedding," hints at the rustic beauty present at these festivals:—

> The maid, and thereby hangs a tale.
> For such a maid no Whitsun ale
> Could ever yet produce.

At Whitsuntide the students of Winchester College break up with the solemn performance of the well-known ode or song of *Dulce Domum*, the celebration of which is invariably attended by the leading clergy and gentry of the town and neighbourhood. Its origin is involved in mystery, as well as the occasion of its composition: tradition ascribes it to a youth in a state of melancholy, wasting his life in fruitless sorrow, at his separation from home and friends.

Sheepshearing Time is marked in the Ephemeris of Nature, June 5, as *Tonsura*; though Dyer lays down for it the following tokens:

> If verdant Elder spreads
> Her silver flowers, if humble Daisies yield
> To yellow Crowfoot, and luxuriant grass,
> Gay Shearing Time approaches.

Again, of its homely joys:—

> At Shearing Time, along the lively vales,
> Rural festivities are often heard:
> Beneath each blooming arbour all is joy
> And lusty merriment: while on the grass
> The mingled youth in gaudy circles sport,
> We think the golden age again return'd,
> And all the fabled Dryades in dance.
> Leering they bound along, with laughing air,
> To the shrill pipe, and deep re-murmuring chord
> Of th' ancient harp, or tabor's hollow sound.
> While th' old apart, upon a bank reclin'd,
> Attend the tuneful carol, softly mixt
> With every murmur of the sliding wave,
> And every warble of the feather'd choir;
> Music of Paradise! which still is heard
> When the heart listens.

Wrestling was another sport of Shearing Time, and the usual prize was a ram. Chaucer says of Sir Thopas:—

> Of wrastling there was none his pere,
> Where any Ram shulde stande.

But, according to the old poem called "A Lytel Geste of Robyn Hode," prizes of greater value and dignity were sometimes given—a white bull a great courser, with saddle and bridle, a pipe of wine, and a red gold ring.

Wrestling was borrowed from the Olympic games; it was, too, the accomplishment of a hero, in the ages of chivalry. Sir Thomas Parkyns, Bart., the celebrated Wrestler, published a mathematical Treatise on his favourite sport.

Trinity and St. Barnabas were formerly anciently commemorated with processions, "ghirlands" of flowers, &c. Ray has a proverb:—

> Barnaby Bright, Barnaby Bright,
> The longest day and the shortest night;

indicating the almost nightless day of the solsticial season.

Corpus Christi is, in Catholic countries, celebrated with music, lights, flowers strewed in the streets; tapestries hung out of the windows; Coventry plays, &c.: and many are the entries in old church-books, of rose-garlands and torches on Corpus Christi. In the festivals of this day, too, originated Shrewsbury Show, and similar pageants of trading companies, corporation officers, and religious fraternities. In 1845, there was at Nottingham a splendid procession, on Corpus Christi day, at the newly-erected Catholic Church, dedicated to St. Barnabas.

Midsummer Eve, the *Vigil of St. John the Baptist's Day*, was formerly welcomed with bonfires, supposed to be a relic of Druidical superstition. Gathering roses, and sowing hemp-seed, for love-divinations, were also Midsummer-eve customs.

The Summer-day of the poet is one of unclouded splendour:—

> The time so tranquil is and clear,
> That nowhere shall ye find,
> Save on a high and barren hill,
> An air of passing wind.
> All trees and simples, great and small,
> That balmy leaf do bear,
> Than they were painted on a wall,
> No more they move or steir.
> The rivers fresh, the caller streams
> O'er rocks can swiftly rin,
> The water clear like crystal beams,
> And makes a pleasant din.
> Alexander Hume.

In all the floral festivities of this period, the rose is distinguished:—

> The blushing rose, within whose virgin leaves,
> The wanton wind to sport himself presumes,
> Whilst from their rifled wardrobe he receives,
> For his wings purple, for his breath perfumes.—Fanshawe.

Herrick has left us this lyric calendar of festal "Country Life," which may not inappropriately be quoted here:—

> For sports, for pageantry, and plays,
> Thou hast thy eves and holidays
> On which the young men and maids meet,
> To exercise their dancing feet;
> Tripping the comely country round,
> With daffodils and daisies crown'd.
> Thy wakes, thy quintels, here thou hast;
> Thy May-poles, too, with garlands grac'd;
> Thy Morris-dance, thy Whitsun ale,
> Thy Shearing Feast, which never fail;
> Thy harvest-home, thy wassail bowl,
> That's tost up after fox i' th' hole;
> Thy mummeries, thy twelfth-night kings
> And queens, thy Christmas revellings;
> Thy nut-brown mirth, thy russet-wit;
> And no man pays too dear for it.
> I. T.

JUNE.

The songs of the birds continue; the skylark may frequently be heard soon after two o'clock in the morning; young birds are now in abundance, and the old ones are much engaged attending to them. Rooks desert their rookery with their young ones. The swallow tribe are very active, and the call of the quail is heard.

BOMBYX POTATORIA—MOTH.

Insects abound everywhere, and they are too abundant even to enumerate; the stag-beetle during this month flies on fine evenings. Grasshoppers appear; young frogs migrate. Butterflies and moths are innumerable; for an account of the former (*see next month*). We shall at once proceed with that of one species of the latter.

The distinguishing characteristics of moths are sharp-pointed horns, which in many species are simple, and in many are beautifully feathered along the sides. This genus, like that of the butterfly, is so exceedingly numerous, that we have room only to speak of one fully. The one we have chosen is designated Bombyx. The insects of this tribe fly only in the evening. During the day they lie under the leaves, or beneath the branches, or in the clefts of trees; towards evening they crawl about, then flutter their wings, and become active as the evening advances; finally they start from the trees, and continue flying about till it is quite dark. The males are commonly the first on the wing in search of the females, which in some few species are without wings, in which case they wait upon the trees or herbage for the arrival of the male. They are all produced from caterpillars; these are of a long cylindrical form, having in some few species a smooth skin; sometimes the skin is covered with a fine silky down or hairs, and some of the larger kinds are covered with spines or bristles.

All the larvæ subsist on vegetables. Their jaws are strong and of a horny texture; and below there is a small opening through which the creature draws a silky thread, which is of considerable use to it, for when it wishes to descend from one branch of the tree to another, instead of pursuing a circuitous route, by crawling or walking, it need only fasten one end of the thread to any particular spot, and lower itself by its assistance to the place required. In a similar way, when observed by birds or other enemies, it can drop in an instant and elude the enemy, waiting concealed among the leaves till the danger is over, and then remounting to its former spot by aid of its silken thread.

Like other larvæ of the moth tribe, they cast their skins several times. When full grown, and approaching the pupa state, they spin a sort of web, as is well known in the case of the silkworm (*Bombyx mori*) which is of this genus. These moths remain in this state within their cocoon for a certain time, some for only a few days, others a few weeks, and others many months. The same day that the creatures emerge from the pupa state they are in a condition to perpetuate their race; almost immediately after which the male dies; and the females expire soon after they have deposited their eggs in a proper place for the young brood to find subsistence.

The cocoons of some of these species are employed in the East Indies for the manufacture of silk. We now proceed to describe a few of the species, which may be expected to appear this month.

Bombyx Potatoria, the engraving of which is above, wings slightly indented, yellow brown, with two white dots, in the upper pair. The caterpillar from which this moth proceeds is tailed, crested, hairy, dark brown, speckled with white.

Bombyx Vinula. This is a very elegant insect, without being remarkable for the gaiety of its colours. Its wings are grey, with blackish streaks; the thorax and abdomen grey, spotted with brown, and both are extremely downy; the body is marked with transverse black bars. The caterpillar of this moth is far more brilliant than the moth itself; it is nearly two inches in length, and it is of a beautiful green, with the back of a dull purple; being separated from the green on the sides by a pair of white stripes, which begin from the head, run upwards to the top of the back, and from thence are continued along the sides to the tail; the face is flat, yellowish, surrounded by two borders, the inner one black, the outer one red; and it is distinguished by two black eyes or spots on each side of the upper part. On the insect being irritated, two long red horns proceed from the tail; the insect seems to use them for the purpose of frightening its disturbers. This creature possesses the power of ejecting from its mouth, to

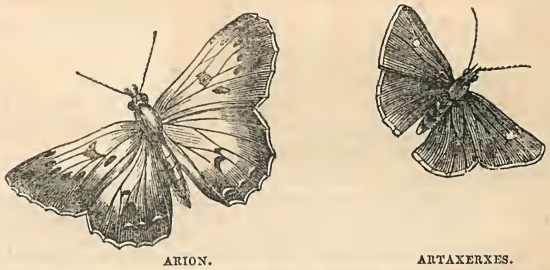
MOTH: BOMBYX VINULA.

a considerable distance, an acrid reddish fluid, which it uses as a further defence and which produces considerable irritation, if thrown into the eyes of the spectator. This caterpillar may be found on willows and poplars. The chrysalis is thick, short, and black, and, in the month of May or June, gives birth to the moth.

Bombyx Caja, or Great Tiger Moth. The upper wings whitish, with irregular blackish spots; lower ones orange, spotted with black. The caterpillar is of a deep brown, with white specks; extremely hairy, and feeds on plants. It changes into a chrysalis in June, and the moth appears in July.

We now proceed briefly to describe a few butterflies visible in this month:—

The Cabbage Butterfly. The wings are rounded, entire, white; tip of the upper pair brown. This is the common white butterfly, known in our gardens; it proceeds from a yellowish caterpillar, freckled with bluish and black spots, and which changes during Autumn into a yellowish grey chrysalis; the butterfly appears early in the Spring, and is seen almost throughout the Summer.



ARION. ARTAXERXES.

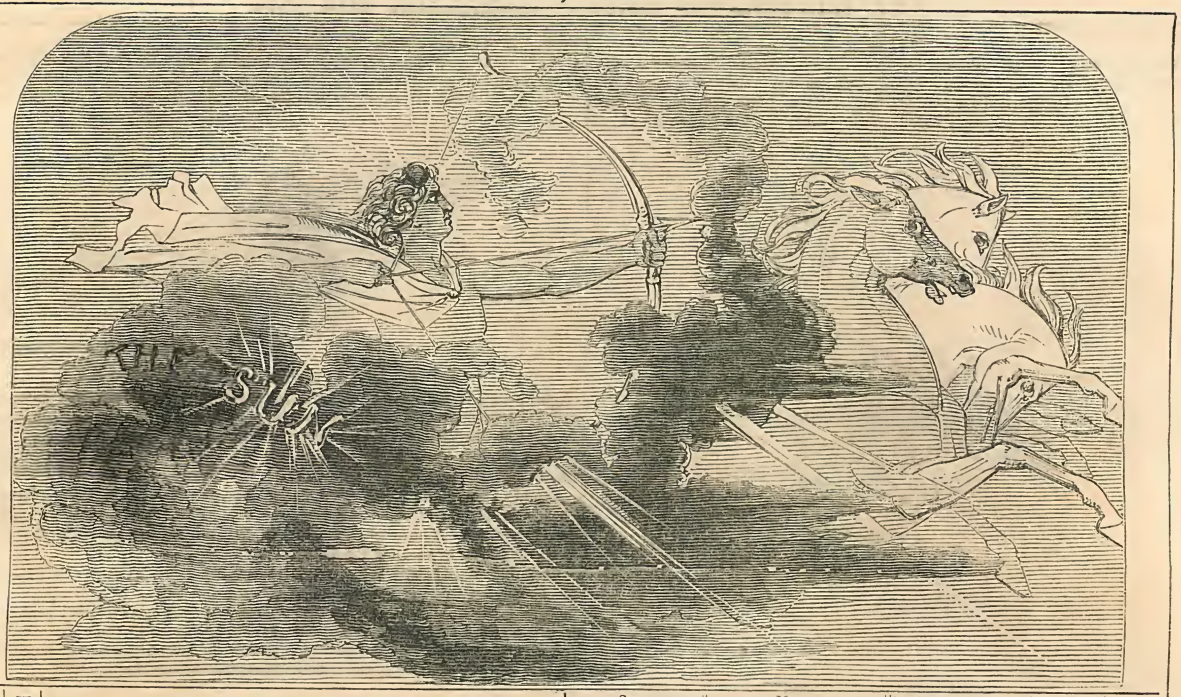
Arion. Wings above are blue, edged with brown, and spotted with black beneath grey, with many small eyes.

Artaxerxes. Wings brown, upper pair with a white dot in the middle, lower nes with red marginal spaces, with red and white dots on the margin.

STAG BEETLE.

Lucanus Cervus; Stag Beetle, sometimes measures nearly two inches and a half in length, from the tips of the jaws to the end of the body. Its general colour is a deep chesnut, with the thorax and head, which is of a blacker cast; the jaws are often of a brighter or redder chesnut colour than the wing shells; the legs and under parts are black, and the wings, except during flight, are concealed under the shells, are large, and of a fine pale yellowish brown.

JULY, 1846.



M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination North ° ′	Moon. Rises—R. Sets—S. H. M.	Moon. Souths. H. M	Age D.	High Water at London Bridge. Morning. H. M.	High Water at London Bridge. Afternoon H. M.	Equation of Time. Add M. S.	Day of the Year
1	W	Battle of the Nile, 1780	3 49 R	23 8	Afternoon.	Afternoon	☽	6 37	6 59	3 25	182
2	Th	Hungerford market opened, 1833	8 17 S	23 4	11 49 S	6 32	9	7 21	7 46	3 37	183
3	F	Dog days begin—This name was given in reference	3 50 R	23 0	Morning.	7 20	10	8 15	8 49	3 48	184
4	S	to the helincal rising of Sirius, commonly called the Dog Star, which in Pliny's time was on the 18th of July	8 16 S	22 55	0 17 S	8 11	11	9 21	9 53	3 59	185
5	S	4th Sunday after Trinity	3 52 R	22 49	0 51 S	9 5	12	10 25	11 0	4 10	186
6	M	Old Midsummer-day—Adam Smith died, 1790	8 15 S	22 43	1 33 S	10 3	13	11 34		4 20	187
7	Tu	*St. Thomas à Becket*—Commemorative of the	3 54 R	22 37	2 24 S	11 3	14	0 4	0 33	4 30	188
8	W	assassination of this extraordinary man before the Altar in Canterbury Cathedral—Oxford Act and Cambridge Commencement	8 14 S	22 31	Afternoon.	Morning.	●	0 59	1 27	4 39	189
9	Th	Bourbons restored, 1815—Massacre in Madrid,	3 56 R	22 24	8 17 R	0 4	16	1 50	2 14	4 48	190
10	F	Mercury sets at 9h. 22m. P.M. [1834	8 13 S	22 17	8 53 R	1 4	17	2 40	3 5	4 57	191
11	S	Oxford Trinity Terms ends	3 58 R	22 9	9 25 R	2 3	18	3 30	3 53	5 5	192
12	S	5th Sunday after Trinity	8 12 S	22 1	9 53 R	2 58	19	4 16	4 38	5 13	193
13	M	Parliament at Nottingham, 1334	4 0 R	21 52	10 19 R	3 52	20	5 4	5 28	5 21	194
14	Tu	Venus rises at 1h. 30m. A.M.	8 10 S	21 43	10 46 R	4 44	21	5 53	6 16	5 28	195
15	W	*St. Swithin*—Remarkable on account of a well-	4 2 R	21 34	11 16 R	5 34	☾	6 40	7 7	5 34	196
16	Th	known popular notion, that if it rain on this day, there will be more or less rain for forty days to come. St. Swithin lived a thousand and three years ago. He was an eminently pious and learned bishop of Winchester, and priest of King Egbert	8 8 S	21 25	11 46 R	6 25	23	7 33	8 3	5 40	197
17	F		4 4 R	21 15	Morning.	7 15	24	8 30	9 8	5 46	198
18	S	Mars sets at 9h. 0m. P.M.	8 6 S	21 4	0 21 R	8 5	25	9 42	10 17	5 51	199
19	S	6th Sunday after Trinity	4 6 R	20 54	1 2 R	8 56	26	10 53	11 30	5 56	200
20	M	Burns died, 1796, aged 37	8 4 S	20 43	1 48 R	9 46	27		0 4	6 0	201
21	Tu	Lord William Russell beheaded, 1683	4 9 R	20 31	2 40 R	10 35	28	0 34	1 0	6 3	202
22	W	Jupiter rises at 0h. 29m. A.M.	8 2 S	20 20	3 35 R	11 23	29	1 23	1 45	6 6	203
23	Th	Gibraltar taken, 1704	4 11 R	20 8	4 33 R	Afternoon	○	2 7	2 24	6 8	204
24	F	Saturn rises at 9h. 6m. P.M.	7 58 S	19 55	Afternoon.	0 54	1	2 44	3 0	6 10	205
25	S	*St. James*	4 14 R	19 42	8 23 S	1 37	2	3 16	3 35	6 12	206
26	S	7th Sunday after Trinity	7 54 S	19 29	8 47 S	2 20	3	3 50	4 5	6 12	207
27	M	Revolution in Paris, 1830, lasted three days	4 17 R	19 16	9 7 S	3 2	4	4 21	4 37	6 12	208
28	Tu	Robespierre guillotined, 1794	7 51 S	19 2	9 30 S	3 44	5	4 52	5 10	6 12	209
29	W	Fieschi's "infernal machine" exploded, 1835	4 21 R	18 48	9 52 S	4 28	6	5 26	5 43	6 10	210
30	Th	Uranus rises at 9h. 54m. P.M.	7 49 S	18 34	10 19 S	5 13	7	6 2	6 21	6 9	211
31	F	Greenwich Hospital founded, 1696	4 2 R	18 19	10 50 S	6 1	☽	6 42	7 4	6 6	212

Times of changes of the Moon, and when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth, in each Lunation.

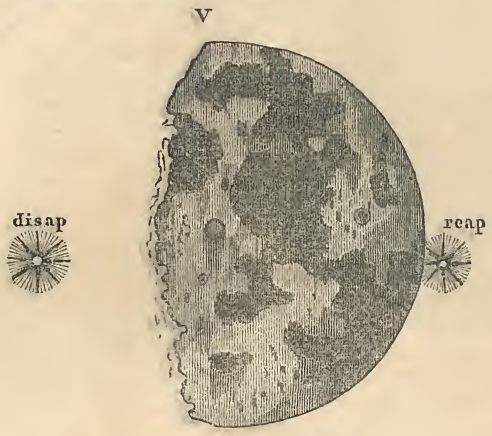
					Days of the M.
First Quarter	1d.	9h.	24m.	P.M.	1
Full Moon	8	7	11	,,	6
Third Quarter	14	1	24	,,	11
New Moon	23	8	3	A.M.	16
First Quarter	31	11	3	,,	21
Apogee	25	7		,,	26
Perigee	10	4		,,	

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Mercury. Right Ascension.	Mercury. Declination North.	Venus. Right Ascension.	Venus. Declination North.	Mars Right Ascension.	Mars Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
7h. 35m.	23° 33′	3h. 49m.	17° 46′	8h. 19m.	20° 50′	4h. 11m.	20° 19′	22h. 12m.	12° 41′	0h. 53m.	4° 57′
8 15	21 39	4 13	19 2	8 32	20 5	4 15	20 31	22 12	12 46	0 53	4 58
8 50	19 12	4 37	20 7	8 45	19 17	4 19	20 41	22 11	12 52	0 53	4 59
9 20	16 27	5 1	21 1	8 58	18 25	4 23	20 51	22 10	12 58	0 54	5 0
9 46	13 34	5 26	21 42	9 11	17 30	4 28	21 0	22 9	13 4	0 54	5 0
10 8	10 44	5 51	22 9	9 24	16 32	4 31	21 9	22 8	13 12	0 54	4 59

JULY.

The Moon in her path must necessarily pass between the Earth, and many Stars; and, therefore, causes an occultation of the Star. The times at which some of the Stars are thus hidden by the Moon, are noted in the Astronomical Occurrences of each month; but, during this year there will be only one Star of the first magnitude occulted by the Moon. This phenomenon takes place on July 2d., and is represented in the following Engraving.



OCCULTATION OF α VIRGINIS.

The Stars generally become invisible to the naked eye on the approach of the Moon, on account of the quantity of light from the Moon quite drowning that of the Star; but, it is possible that this Star may be traced to its disappearance by the naked eye. The disappearance of a Star, when occulted by the Moon, is instantaneous, and, to a person who observes such for the first time is very striking; the Star being bright, and in an instant gone altogether without any apparent cause. The Star, on this occasion, is most favourably situated, the disappearance occurring on the dark side of the Moon at the place, as shown in the engraving: and it will take place at 13 minutes after 8 o'clock in the evening. The Star will be behind the Moon for one hour and fifteen minutes, and will re-appear at the part of the bright limb as shown in the engraving, at twenty-eight minutes after 9 o'clock. Its re-appearance will not be so striking as its disappearance, because it emerges at the illuminated limb; but when a Star re-appears at the dark limb, it is as striking as when it disappears at that limb; appearing instantaneously and shining brilliantly, when a moment before nothing was visible.

The drawing of the Moon represents her when about nine days old, and when she is more than a half Moon, and is of that form called gibbous; the similar shining spaces may be seen here as were shown in the engraving in February in the dark part of the Moon near to the confines of light and darkness. The letter V indicates the highest point of the Moon at the time of the phenomenon,

The varying phases of the Moon are as follows:—That side of the Moon can be only illuminated which at any time is towards the Sun, the other side remaining in darkness; and as that part of her can only be seen by us which is turned towards the Earth, we perceive different portions of her illuminated, according to her various positions with respect to the Sun and the Earth. At the time when she is in, above, or below the same straight line, joining the Sun and the Earth, and between them, her dark side is wholly turned towards us, and in that situation she is called the New Moon; at which time she is invisible to us; and if she be, at this time, absolutely in the same straight line joining the Sun and the Earth, an Eclipse of the Sun takes place. In a short time afterwards she appears like a fine crescent in the afternoon, with her horns turned towards the East; as she advances in her orbit, the crescent increases till when she is about a week old, she appears a half Moon, and afterwards increases till she is again in, above, or below the line joining the Sun and the Earth prolonged, the Earth being between them. And if the line from the Sun to the Earth passes to the centre of the Moon, an Eclipse of the latter takes place. She then gradually decreases and disappears again as at first mentioned.

For some days after the New Moon has appeared, the dark portion of her disc, not exposed to the Sun, is distinctly visible, and is well known as the New Moon in the old one's arms. This effect is best seen when the Moon is about three or four days old, and its true cause was first pointed out by Leonardo da Vinci, who attributed it to the light arising from scattered beams of the Sun being bent into the Earth's shadow by refraction, and reflected to the Moon, and that they undergo a second reflection at the Moon's surface, and are transmitted back to the Earth. This hypothesis is favourably received by Astronomers.

This phenomenon was ascribed by the ancients to the native light of the Moon, to which, on account of its pale ashy hue, they gave the name *lumen incinerosum*, and it is called by the French, *lumière cendrée*. At the Moon the Earth appears the largest body in the Universe, appearing thirteen times greater than the Moon does to us, exhibiting similar phases to herself, but in the opposite order; for when the Moon is full to us, the Earth is invisible at the Moon; and when the Moon is new to us, the Earth appears fully illuminated at the Moon. It follows, as the Earth is so much larger than the Moon, that more light is reflected from the Earth to the Moon than we receive from the Moon—and, as it happens that at about the time of New Moon, the Earth is nearly full to her, and reflects so much light upon her, that the whole of that side which is towards the Earth becomes visible, as well as that portion which is illuminated by the Sun. Schröter considered that a brighter reflection appeared on this obscure part of the Moon, when the land was so situated as to receive the rays from the Sun which were reflected to the Moon, than when they fell on the Pacific or Atlantic Oceans.

Mercury, on July 1st, sets midway between N.W. by W. and the N.W.; at 9h. 16m. P.M., he is situated near Castor and Pollux, at about 4 degrees further from the Pole Star than Pollux is from that star. On the 15th he sets near the W.N.W. point of the horizon, at 9h. 17m. P.M.; he is nearly at the same distance from the Pole Star that Regulus is from that star, and he is 11 degrees E. of Regulus. On the last day he sets near the W. by N. point of the horizon, at 8h. 34m. P.M.; he is about 5 degrees farther from the Pole Star than Regulus is from that star, and he is 8 degrees W. of Regulus. On the 23rd day he will be a little E. of Regulus; on the 24th day he will be 1 degree S. of that star; and by the 25th he will be a little W. of it.

Venus, on the 1st day, rises near the N.E. by E., at 1h. 36m. A.M.; she is in the constellation of Taurus, and situated about 3 degrees south of the line, joining the Pleiades and Aldebaran. On the 15th day she rises in N.E. by E., at 1h. 26m. A.M.; an imaginary line from the Pole Star, through Capella, and continue 25 degrees from the latter star, is nearly the place of Venus; she is also about 9 degrees from Aldebaran, and 15 degrees from γ Orionis. On the last day she rises in the N.E. by E., at 1h. 35m. A.M., and she is situated nearly in a line joining γ Orionis and Castor, being 17 degrees from Castor, and 22 degrees from γ Orionis. The star of the third magnitude, about 6 degrees S.W. of Venus, is γ Geminorum.

Mars on the first day sets in the N.W. by W. at 9h. 42m. P.M.; on the last day he sets at 8h. 26m. P.M., and he is about 5° E. of Regulus; on the 15th day he was about 16° E. of Regulus.

The following is the position of the Constellations that are rising; on the meridian; and setting on the 1st day at midnight:—

Constellations Rising.	Constellations on the Meridian.	Constellations Setting.
A part of Auriga in N. by E.	The head of the Lynx 22 degrees above N. horizon	
Perseus 15° above N.E. by N.	Camelopardalus 40° degrees above N. horizon	Leo Minor in N.W.
A part of Aries in E.N.E.	Draco, between Polaris and the Zenith	Leo in N.W. by W.
Aquarius 20° high above S.E.	Lyra, in the Zenith and a little S. of it	Virgo in W.
Capricornus 15° high above S.E. by S.	The Milky Way 45 degrees above S. horizon	Libra 15° above S.W.
Rump of Sagittarius in S. by E.	Head of Sagittarius 15 degrees above S. horizon	Scorpio in S.W. by S.

ASTRONOMICAL OCCURRENCES IN JULY.

PLANETS.

Names.	Time of passing the Meridian or Southing, on the 15th. day.	When near the Moon.	Distance from the Moon North or South.
	H. M.	D. H. M.	DEG.
Mercury	1 43 P.M.	25 10 23 P.M.	4 North
Venus	9 24 A.M.		
Mars	1 24 P.M.	24 10 17 „	6 North
Jupiter	8 51 A.M.	19 0 58 A.M.	2 North
Saturn	2 40 „	12 0 24 „	6 South
Uranus	5 23 „	15 0 23 „	2 South

OCCULTATION OF STARS BY THE MOON.

Names of the Stars.	Time of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
	D. H. M.	
α Virginis	2 8 13 P.M.	Dark
	2 9 28 „	Bright
ν Scorpii	5 10 55 P.M.	Dark
	5 11 36 „	Bright

July 29th. 2h. Mercury at his greatest East elongation, being 27° East—*(See September.)*
July 16th. 2h. 37m. A.M., Jupiter's 1st. Satellite disappears at the distance of nearly half of his diameter from him on the West side.
July 1st. 9h. A.M., the Sun at the greatest distance from the Earth during the year being 96 millions, 590 thousand and 90 miles from the Earth—*(See January.)*

JULY.

Then July comes with his hot calms,
And constant in his kind;
The man doth thrive to thirty-five,
And sober grows his mind;
His children small do on him call,
And breed him sturt and strife;
His wife may die, and so must he
Go seek another wife.

OLD POEM; 1653.

SEEKING THE SHADE.—BATHING, SWIMMING, AND FISHING.

JULY was named Julius by Marc Antony, in compliment to Julius Cæsar. The Saxons called it *Hew-Monat*, or *Hey-Monath*, because in it they generally mowed, and gathered in their hay; it was also called *Maed Monath*, because at this season the meads are covered with bloom.

July 1 is the Anniversary of two important events—the Battle of the Boyne, in 1690, at which both James II., and William III., were present; and the Battle of the Nile, in 1780, the result of which was so brilliant, that Nelson said victory was not a sufficient name for it.

Churchill thus glances at the superstitious notions about rain on St. Swithin's Day, (July 15):—

July, to whom the Dog Star in her train,
St. James gives oysters, and St. Swithin rain.

Gay, in his *Trivia*, mentions:—

How if on Swithin's Feast the welkin low'rs,
And every penthouse streams with hasty show'rs,
Twice twenty days shall clouds their fleeces drain,
And wash the pavements with incessant rain."

There is, too, an old proverb:

St Swithin's Day, if thou dost rain,
For forty days it will remain:
St. Swithin's day if thou be fair,
For forty days 'twill rain na mair.

There is a quaint saying, that when it rains on St. Swithin's Day, it is the Saint christening the Apples. In some church books, there are entries of gatherings of "Sainte Swithine's farthyngs" on this day. St. Swithin was *Chancellor of the Exchequer* in the time of King Ethelbert, and the great patron saint of the Cathedral and City of Winchester; in the former is shown a large sculptured stone, which was long believed to cover the remains of the Saxon Saint, but this was disproved in 1797, by the finding of a complete skeleton beneath the stone; and the skull of St. Swithin is known to have been deposited in Canterbury Cathedral: his shrine was formerly kept in a chapel behind the altar in Winchester Cathedral.

With respect to "Rain on St. Swithin's Day," Mr. Howard, the meteorologist, observes: "The notion commonly entertained on this subject, if put strictly to the test of experience *at any one station* in this part of the island, (London), will be found fallacious. To do justice to popular observation, I may now state, that in a majority of our Summers, a showery period, which, with some latitude as to time and circumstances, may be admitted to constitute daily rain for forty days, does come on about the time indicated by this tradition: not that any long space before is often so dry as to mark distinctly its commencement."

A showery disposition in the air has certain tokens, of which the frequency of the Rainbow is one. All showers, however favourable their position with respect to the sun, do not, however, produce equally marked and beautiful Rainbows:

O arch of promise, seen in liquid skies!
With glittering band of many coloured raies
In harmonie all blending. How mine eyes
Love to observe thee. As these showerie daies,
Changing and many weathered, sometimes smile
And flash short sunshine through black clouds awhile.
Then deepening dark again, they fall in raine,
So is it pleasant now to pause and view,
Thy brilliant sign in clouds of waterie hue,
And know the storm will not return againe.

St. James's Day (July 25th), was formerly observed by the distribution of food to such as chose to demand it. On St. James's Day (old style) oysters came in in London; and there is a popular notion, like that relating to geese on Michaelmas Day, that whoever eats oysters on that day, will never want money for the rest of the year. Yet, this does not accord with another popular conceit, in Butter's *Dyet's Dry Dinner*, 1599: "it is unseasonable and unwholesome in all months that have not an R in their name to eat an oyster."

Our artist has depicted a beautiful scene of noontide leisure, an episode in the life of "Illustrious Summer." Bathing, sailing, fishing, and all kinds of water frolics, are now in high season. Thomson gives us a life-like picture of the first:—

Cheer'd by the setting beam, the sprightly youth
Speeds to the well-known pool, whose crystal depth
A sandy bottom shows. Awhile he stands
Gazing th' inverted landscape, half afraid
To meditate the blue profound below;
Then plunges headlong down the circling flood.
His ebon tresses, and his rosy cheek
Instant emerge; and through the flexile wave,
At each short breathing by his lip repell'd,
With arms and legs according well, he makes,
As humour leads, an easy-winding path;
While, from his polish'd sides, a dewy light
Effuses, on the pleas'd spectators round.

Such a scene, too, as the Poet of Nature sings, is here:

The brook ran bubbling by, and sighing weak,
The breeze among the bending willows play'd.
* * * * *
Warm in their cheek, the sultry season glow'd;
And, rob'd in loose array, they came to bathe
Their fervent limbs in the refreshing stream.
* * * * *
This is the purest exercise of health,
The kind refresher of the summer heats;
* * *
Even from the body's purity the mind
Receives a secret, sympathetic aid.

The Fishing at this time of year, that is to say, Perch and Trout fishing, is, perhaps, the best of any fishing that the circle of the season produces. "The witty, companionable, and gentle Gay," who often tried his art to "tempt the tenant of the brook," gives this poetical picture of the fly-fisher:—

He shakes the boughs that on the margin grow,
Which o'er the stream a waving forest throw,
When, if an insect fall (his certain guide),
He gently takes him from the whirling tide.
Examines well his form with curious eyes,
His gaudy vest, his wings, his horns, and size;
Then round the hook the chosen few he winds,
And on the back a speckled feather binds;
So just the colours shine through every part,
That nature seems to live again in art.

Sir Henry Wootton, Provost of Eton College, says Walton, was "a most dear lover and a frequent practiser of the Art of Angling, of which he would say, 'Twas an employment for his idle time, which was then not idly spent, 'for Angling was, after tedious study, a rest to his mind, a cheerer of his spirits, a diverter of sadness, a calmer of unquiet thoughts, a moderator of passions, a procuror of contentedness,' and 'that it begat habits of peace and patience, in those that professed and practised it.'"

I.

JULY.

During this month those birds sing only which breed late. The young birds of the earlier broods begin to warble in a soft tone, or to *record*, as it is termed. The quail calls; young partridges fly; towards the end of the month the cuckoo leaves us; swallows and martens congregate, and swifts begin to depart.

Insects are very abundant—ants, flies, beetles, butterflies and moths abound.

In fact, we have now arrived at the time when the most splendid of all the order of insects, consisting of the moth and butterfly tribes, are becoming numerous. Who has not seen the elegant butterfly fluttering over flowers, which they frequently excel in splendour of colour, and at length resting on them with a touch so light as not to appear to be resting there? Who has not seen them, whilst reposing on the flower, opening and shutting their beautiful wings, alternately erecting and depressing their long and slender antennæ, popularly called horns? and who has not seen the beautiful apparatus by which they extract the nectar from the flowers? We feel assured that there are few among our readers who have not noticed all these things, and who have not been struck with the elegance of these beautiful creatures.

All butterflies and moths proceed from caterpillars, which afterwards change into chrysalides, out of which after a certain time proceeds the perfect insects. The female butterfly deposits her eggs upon such substances as are proper to nourish the caterpillars which proceed from them; thus the common cabbage butterfly places them on cabbage—*(See last month)*: the peacock butterfly on nettles: the swallow-tailed butterfly on fennel or rue: the atalanta butterfly on nettles, &c.—*(See next month)*. These eggs are simply attached by some glutinous secretion, to leaves or stems; in the same way are the eggs of moths placed, except that they are inclosed in down.

The distinguishing characteristics of butterflies are that the horns terminate in a small knob, and the wings, when the insect is at rest, are so placed that they meet upwards. The species of butterflies are so astonishingly numerous, * that it is found necessary to divide them into different sections. The largest of the genus are termed knights or chiefs, and are divided into Greeks and Trojans, and named from the principal heroes of the Iliad. The Trojans are distinguished by red coloured spots on each side near the breast; and are generally dark coloured. The Greeks have no red marks on the breast, and their colours are generally more brilliant. In our pictorial illustrations of last month we have represented two of those insects, Arion and Artaxerxes, as appearing then, and which will continue to appear in this month. In our engravings of next month will be found represented the swallow-tailed butterfly, which then appears, also with its caterpillar and chrysalis.

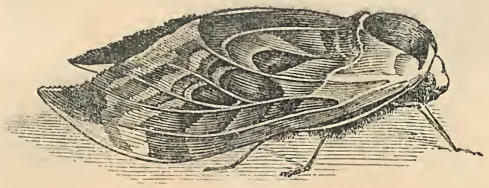
Butterflies and moths are divided into three distinct genera, viz.—Butterfly, Sphinx, and Moth. In the last month we have spoken of one species of the moth tribe, and we now proceed to speak of that of the sphinx.

SPHINX MOTH.

The Sphinx or hawkmoths are a genus distinguished by the antennæ or horns, tapering at each end, and which are generally short in proportion to the animal; and by the thickness of their bodies, which in most terminate in a point as is seen in the engraving above.

There are nearly two hundred different species of this genus; they fly about only in the morning and evening; they are slow on the wing, and often make a humming noise. They extract the nectar of flowers. The name of Sphinx is applied on account of the posture assumed by the caterpillars of the larger species, which are often seen with their fore parts risen from, and the rest of the body applied flat to the surface on which they are situated, an attitude much resembling the Egyptian Sphinx. Many of the species are of great beauty and elegance. Most of these caterpillars descend a considerable depth beneath the surface of the ground, when they are about to change into the chrysalis state, and after lying, in some species a few weeks, in others many months, the chrysalis, by the motions of the included animal forces itself up to the surface, and the complete insect appears in its perfect form.

* Latreille has described above 1800 species in the *Encyclopedie Methodique*.



SPHINX MOTH.—OCELLATA.

The above engraving is that of the sphinx ocellata, in an attitude characteristic of moths generally.

The wings are angular, and the upper ones are brown, as also is the body, the former with various shades; the lower wings are of a bright rose colour, each marked with a large black oval with a blue interior and black centre. This insect proceeds from a green caterpillar of a rough surface; marked on each side by seven oblique yellowish white streaks, and one other near the head nearly horizontal; and it is furnished with a horn at its tail. It is chiefly found on the willow; in the month of August or September it passes into the chrysalis state, which is represented in the annexed engraving.

CHRYSALIS OF THE SPHINX OCELLATA.

And the complete insect emerges from this state in the month of June or July.

The Sphinx Atropos, or the death's head moth, may be expected to be found this month. This is the most remarkable and the largest of this genus of moths. It is described by Dr. Shaw as follows:—"The upper wings are of a fine dark grey colour, with a few slight variations of dull orange and white; the under wings are of a bright orange colour, marked by a pair of transverse black bands; the body is also orange coloured, with the sides marked by black bars, while along the top of the back, from the thorax to the tail, runs a broad blue-grey stripe; on the top of the thorax is a very large patch of a most singular appearance, exactly resembling the usual figure of a skull, or death's head, and is of a pale grey, varied with dull ochre and black." When this insect is disturbed it emits a sound something like the squeaking of a mouse; and from this circumstance, as well as from the mark above mentioned, it is held in much dread by the ignorant in several parts of Europe, its appearance being looked upon as an ill omen of approaching fate, similarly to the effect of the cry of the bittern as described in March.

The caterpillar of this insect is often sought after, and, we shall, therefore, be particular in its description. It is sometimes nearly five inches in length, and, being of a proportionate thickness, it surpasses every other European insect of its kind, and is very beautiful; its colour is a bright yellow; the sides are marked with seven broad bands of a mixed violet and sky-blue colour; the tops of these bands meet on the back, and are varied on that part with black specks; on the last joint of its body is a horn, hanging over the joint, of a rough surface, and of a yellow colour. The favourite food of this caterpillar is the potatoe and the jessamine; it is principally found on the former. It changes into the chrysalis state in the month of July or August, and the moth appears in the following June or July.

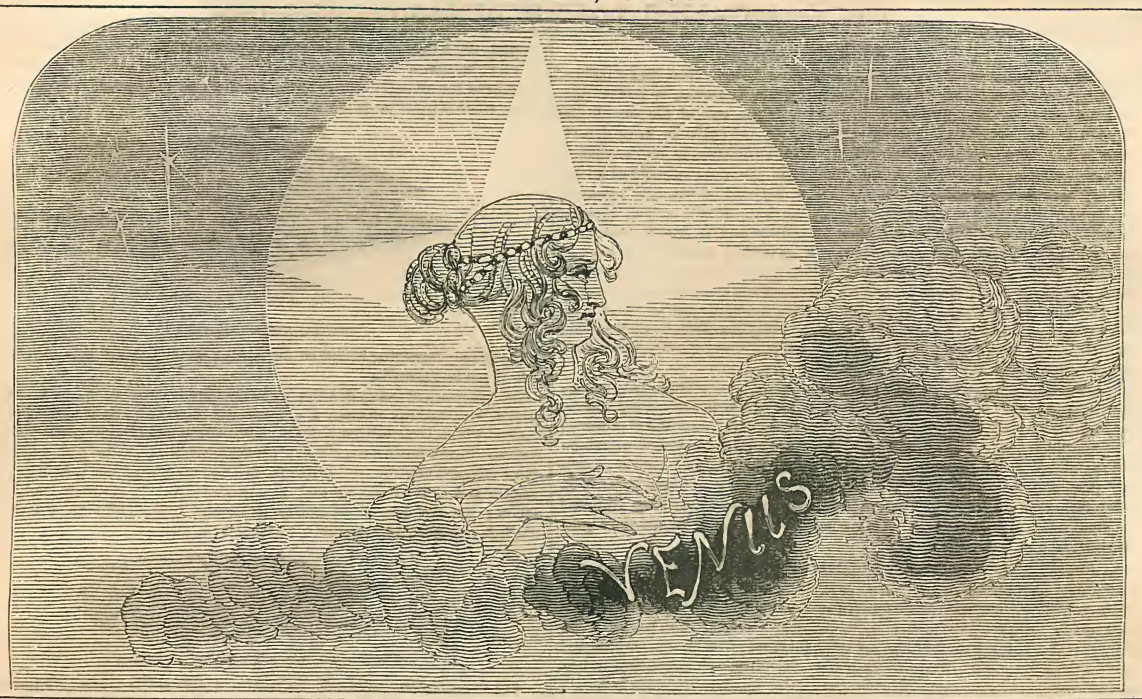
The Privet Hawk-moth.—The wings are entire, the lower ones red, with three black bands; the abdomen is red with black belts. The caterpillar will be found on Privet, and is of a green colour, with oblique lateral streaks, which are of a black before, and white behind; the tail is four-toothed.

Those curious vegetable substances of the fungus tribe may be expected this month. The following is one of that species *generally found growing on trees.*

FUNGUS HYDNUM.

The fungi form a numerous tribe of vegetable bodies, differing in firmness from a watery pulp of short duration, to a leathery woody texture, often very permanent. They cannot properly be said to have any herbage, much less anything like leaves or flowers.

AUGUST, 1846.



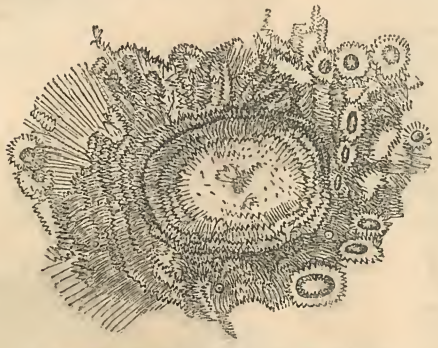
M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination North ° ′	Moon. Rises—R. Sets—S. H. M.	Moon. Souths. H. M.	Moon. Age D.	High Water at London Bridge. Morning. H. M.	High Water at London Bridge. Afternoon H. M.	Equation of Time. Add. M. S.	Day of the Year
1	S	*Lammas Day*.—Lammas Day, is now only remark-	4 25 R	18 4	11 26 S	6 53	9	7 29	7 57	6 3	213
2	S	able as a day of term for some purposes. It was one of the great festival	7 44 S	17 49	Morning:	7 47	10	8 28	9 8	5 59	214
3	M	days of our heathen anecstors. Lammas seems to have been held as a day of	4 28 R	17 34	0 12 S	8 45	11	9 46	10 23	5 55	215
4	Tu	thanksgiving for the new fruits of the earth. It was observed with bread of	7 41 S	17 18	1 8 S	9 45	12	11 2	11 40	5 50	216
5	W	new wheat; and there was a custom in some places at no distant period for	4 31 R	17 2	2 15 S	10 45	13		0 11	5 44	217
6	Th	Ben. Jonson died, 1637—Earl Howe died, 1799	7 38 S	16 46	3 30 S	11 45	14	0 42	1 9	5 38	218
7	F	Mercury sets at 8h. 7m. P.M., in the W. by N.	4 35 R	16 29	4 50 S	Morning.	○	1 37	2 2	5 32	219
8	S	Venus rises at 1h. 44m. A.M.	7 34 S	16 12	Afternoon.	0 43	16	2 26	2 50	5 24	220
9	S	9TH SUNDAY AFTER TRINITY	4 38 R	15 55	8 21 R	1 39	17	3 14	3 36	5 16	221
10	M	*St. Lawrence*—Assassinated by the soldiers of the	7 31 S	15 38	8 49 R	2 34	18	3 58	4 20	5 8	222
11	Tu	Emperor Valerian, and his body roasted on a gridiron. The Church of the	4 41 R	15 20	9 19 R	3 27	19	4 44	5 5	4 59	223
12	W	Escurial at Rome, dedicated to him, is built in the form of a gridiron	7 27 S	15 2	9 50 R	4 19	20	5 27	5 50	4 49	224
13	Th	Dowager Queen Adelaide born, 1792	4 44 R	14 44	10 24 R	5 11	☾	6 13	6 35	4 39	225
14	F	Jupiter rises near E.N.E. at 11h. 12m. P.M.	7 23 S	14 26	11 3 R	6 2	22	7 0	7 25	4 28	226
15	S	*Assumption*—Mars sets at 7h. 46m. P.M.	4 46 R	14 7	11 47 R	6 53	23	7 55	8 27	4 17	227
16	S	10TH SUN. AFT. TRINITY—Bonaparte born, 1769	7 19 S	13 48	Morning.	7 43	24	9 7	9 47	4 6	228
17	M	Duchess of Kent born, 1786	4 49 R	13 29	0 37 R	8 33	25	10 25	11 4	3 53	229
18	Tu	Beattie died, 1803—Twilight nearly ending	7 15 S	13 10	1 32 R	9 21	26	11 42		3 41	230
19	W	Royal George sunk off Spithead, 1782	4 52 R	12 50	2 29 R	10 7	27	0 15	0 40	3 27	231
20	Th	Bloomfield died, 1823—Bernadotte crowned, 1810	7 11 S	12 31	3 30 R	10 52	28	1 4	1 27	3 14	232
21	F	Battle of Bosworth Field, 1485	4 35 R	12 11	4 30 R	11 36	●	1 48	2 5	3 0	233
22	S	Pompeii and Herculaneum buried by volcano, 63	7 7 S	11 51	Afternoon.	Afternoon	1	2 21	2 39	2 45	234
23	S	11TH SUNDAY AFTER TRINITY	4 59 R	11 30	7 13 S	1 1	2	2 53	3 10	2 30	235
24	M	*St. Bartholomew*—St. Bartholomew was an apostle,	7 3 S	11 10	7 36 S	1 44	3	3 25	3 40	2 15	236
25	Tu	but there is no scriptural account of his labours or death. The legend of	5 2 R	10 49	7 59 S	2 27	4	3 55	4 10	1 59	237
26	W	the Romish Church represents him as preaching in the Indies, and con-	6 59 S	10 29	8 24 S	3 11	5	4 26	4 41	1 42	238
27	Th	cluding his life by being flayed alive by order of a brother of the king of Armenia. In memory of his death it was customary in the middle ages, to	5 5 R	10 8	8 53 S	3 58	6	4 56	5 13	1 26	239
28	F	distribute small knives amongst the people. The day has a horrible cele-	6 55 S	9 46	9 26 S	4 47	7	5 30	5 48	1 8	240
29	S	brity in connection with the massacre of the Protestants at Paris in 1572.	5 8 R	9 25	10 6 S	5 38	☽	6 8	6 29	0 51	241
30	S	*St. John Baptist beheaded*	6 51 S	9 4	10 57 S	6 33	9	6 54	7 21	0 33	242
31	M	12TH SUNDAY AFTER TRINITY	5 12 R	8 42	11 56 S	7 30	10	7 52	8 30	0 15	243

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.	Days of the M.	Mercury. Right Ascension.	Mercury. Declination North.	Venus. Right Ascension.	Venus. Declination North.	Mars. Right Ascension.	Mars. Declination North.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
Full Moon 7d. 6h. 0m. A.M.	1	10h. 27m.	7° 38′	6h. 22m.	22° 22′	9h. 38m.	15° 19′	4h. 36m.	21° 18′	22h. 6m.	13° 21′	0h. 53m.	4° 58′
Third Quarter 13 10 51 P.M.	6	10 37	5 34	6 47	22 16	9 51	14 15	4 39	21 25	22 5	13 29	0 53	4 56
New Moon 21 11 25 P.M.	11	10 41	4 14	7 13	21 54	10 3	13 9	4 43	21 31	22 4	13 37	0 53	4 54
First Quarter 29 10 19 P.M.	16	10 36	3 56	7 39	21 17	10 15	12 1	4 46	21 37	22 2	13 45	0 53	4 52
Perigee 7 1 „	21	10 25	4 56	8 4	20 25	10 27	10 52	4 49	21 42	22 1	13 53	0 52	4 49
Apogee 21 10 A.M.	26	10 9	7 4	8 29	19 18	10 39	9 40	4 52	21 46	21 59	14 1	0 52	4 46

AUGUST.

In the month of June we gave as correct a representation of the Moon when full, as the size of our drawing would permit. The several markings of the Moon have been very accurately observed and laid down upon a map, by M. M. Mädler and Beer. To the most remarkable cavities and mountains names have been given, and we have copied from that map, one well known spot called "Tycho," and the following is its representation:



TELESCOPIC APPEARANCE OF A SPOT ON THE MOON.

Those streaky radiations or divergent streams of light seen in the full Moon, also appear round many of the spots, and they appear round Tycho; they have been said to be streams of lava, and it must be admitted they have such an appearance, but they run over hills and valleys for miles.

The spot Tycho consists of a huge mountain in the centre of a vast valley, which is surrounded by a ring of great extent; in the engraving this spot is represented as it appears at the time of full Moon, and, consequently, without shade; at all other times it is variously shaded according to the different angles, that the Sun's light falls upon it, causing shadows of different lengths. It will be readily seen from this, that the surface of the Moon, viewed and watched through a telescope, presents phenomena of the utmost interest.

The increase in the apparent size of the Moon on the same day when in the horizon, to what it appeared to be when high in the heavens, is entirely a visual deception. To the naked eye, she appears larger when in the horizon than at any other time, although she may be, at such time, 4000 miles farther from us, than she was when high.

HORIZONTAL MOON.

The commonly received explanation of this phenomenon was first given by Descartes, and may be stated as follows:—The opinion which we form of the size of a distant object, depends a good deal on its distance; and we judge distance by a comparison with other bodies. When the Moon is high in the heavens there is no interposing object, or one near with which we can compare her. In consequence of the absence of intermediate objects, we suppose her to be very near; but when she is near the horizon, we are used to observe a large extent of land lying between us and objects near the horizon, at the most distant part of which the sky begins to appear; we, therefore, suppose the sky, with the Moon, to be at a great distance. Now, let all the intermediate objects be concealed from view, then the Moon does not appear so large. Let the Moon be viewed through a tube which allows her alone to be seen, and the illusion disappears. And so it will, if viewed through a piece of smoked glass; care must however be taken to place the eye, so that no body be visible but herself. Viewed through a telescope, and correctly measured, it is found not to be really larger. A full Moon in the horizon appears to be of an oval form; this is owing to the atmosphere at the lower part being more dense than that at the upper, and in consequence the lower part of the Moon appears to be more thrown upwards than is the upper, and, therefore, her vertical diameter appears to be shortened. This perhaps will be better understood, by the knowledge of the fact, that every ray of light which passes out of any medium to one more dense, is turned towards the Zenith. Every one must be aware that if they place a straight stick in water, that it appears to be bent in consequence of the different densities of the air and water; so also every ray of light from every heavenly body is similarly bent, till it meets the eye, and that heavenly body is seen in the direction of the last bend of the ray; this deviation from the true place is greater and greater the nearer the object is to the horizon; the difference of those deviations from two points near the horizon, separated by the diameter of the Moon, causes that oval form before referred to.

TIMES OF RISING AND SETTING OF THE PLANETS, WITH THE POINTS OF THE HORIZON INDICATED AT WHICH THEY RISE OR SET, WITH THEIR SITUATIONS RELATIVELY TO THE FIXED STARS NEAR THEM, ETC.

Mercury, on the first day, sets in the W. by N. at 8h. 29m. P.M.; he is situated about 5 degrees further from the Pole Star than Regulus, and about 9° W. of the latter star; on the 15th day he sets a little N. of E. at 7h 16m. P.M., and he is about 8° further from the Pole Star than Regulus, and he is 13° S.W. of the latter star; and on the last day he rises in the E. by N. at 4h. 21m. A.M., and is about 2° S. of Regulus.

Venus rises nearly in the N.E. by E. point of the horizon all the month. On the 1st day at 1h. 36m. A.M., and she is situated nearly in a line joining γ Orionis and Castor, being 16° from the latter and 23° from the former; on the 15th day she rises at 1h. 57m. A.M., and she is 6° farther from the Pole Star than Pollux, being nearly in a line joining Pollux and Procyon, the little Dog Star. On the last day she rises at 2h 38m. A.M., and at this time an obtuse angled triangle is formed by Venus, Regulus, and Procyon, she being 11° from Regulus and 14° from Procyon, being N. of the line joining these Stars.

Mars sets in the W.N.W. on the first day at 8h. 25m. P.M., and he is situated about 4° E. of Regulus. On the 15th day he sets near the W.N.W. at 7h. 47m. P.M., and he is now 4° W. of Regulus. On the last day he sets at 7h. 1m. P.M., in the W. by N. point of the horizon, and he will be found by imagining a line from the Pole Star drawn through the Pointers and continued till it meets another line about 14° W. of Regulus: the Planet is also 14° S.E. of β Leonis at this time.

Jupiter rises nearly midway between the N.E. by E. and the E.N.E. points of the horizon throughout the month. On the 1st day, at 11h. 52m. P.M. At this time he is situated in a line from Aldebaran to midway between Capella and β Aurigæ, at the distance of nearly 7° from Aldebaran. On the 15th day he rises at 11h. 5m. P.M., and he is situated nearly midway between Aldebaran and β Tauri, and he is also near the Moon (*See below*). On the last day he rises at 10h. 9m. P.M. and he is situated a little S. of the line joining Aldebaran and β Tauri, being $7\frac{1}{2}$° from the latter, and $9\frac{1}{2}$° from the former.

Saturn rises in the E.S.E. point of the horizon throughout the month. On the first day at 8h. 34m. P.M., and on the last day at 6h. 33m. P.M.

The following is the position of the Constellations that are rising; on the meridian; and setting on the 1st day at midnight:

Constellations Rising.	Constellation on the Meridian	Constellations Setting.
	The head of Ursæ Major 27° above N. horizon	Leo Minor in N.N.W.
A part of Gemini in N.N.E.	Cephens between the Zenith and Polæris	Coma Berenices in N.W. by N.
Taurus in N.E. by E.	Cygnus near the Zenith and S of it	Boötis in W.N.W.
Pleiades 10° above E.N.E.	Delphinus 55° above S horizon	Libra in W. by S.
Cetus from E. to S.E.	Capricornus 20° above S horizon	Sagittarius in S.S.W.
Piscis Australis in S.S.E.	The Northern Crown (Corona Borealis) 30° above W. by N.	

ASTRONOMICAL OCCURRENCES IN AUGUST.

PLANETS.

Names.	Time of Passing the Meridian or Southing, on the 15th day.	When near the Moon.	Distance from the Moon North or South.
	H. M.	D. H.	DEG.
Mercury	1 4 P.M.		
Venus	10 0 A.M.		
Mars	0 39 P.M.	22 5 P.M.	5 North
Jupiter	7 12 A.M.	15 4 „	3 North
Saturn	0 30 A.M.	8 8 A.M.	6 South
Uranus	3 20 A.M.	11 8 „	2 South

OCCULTATION OF STARS BY THE MOON.

Names of the Stars.	Time of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
	D. H. M.	
21 Piscium	9 11 14 P.M.	Bright
	10 0 20 A.M.	Dark
δ^3 Tauri	15 1 1 „	Bright
	15 1 54 „	Dark

August 1st, 7h. A.M., Mercury at his greatest distance from the Sun.
August 9th, 7h. 23m A.M., Mars at his greatest distance from the Sun.
August 11th, 8h. A.M., Mercury stationary with respect to the fixed stars.—(*See September.*)
August 25th, 9h. 35m. A.M., Mercury in inferior conjunction with the Sun.—(*See September.*)
August 8th, 2h. 47m. A.M., an Eclipse of Jupiter, 1st Satellite; on the W. side of the planet, at the distance of $\frac{3}{4}$th of his diameter.
August 15th 3h. 1m. A.M., an Eclipse of Jupiter, 2nd Satellite, on the W. side of the planet, at the distance of 1 of his diameter.
August 6th, 1h. 34m. A.M., an Eclipse of Jupiter, 3rd Satellite, on the W. side of the planet, at the distance of 2 of his diameters.

THE HOST SURROUNDED BY HIS FAMILY, RECEIVES THE QUEEN OF HARVEST FOLLOWED BY THE HOCK-CART AND CEREAL PROCESSION.

August is named from Octavius Cæsar, better known as Augustus, when the Senate, to pay the same tribute to him as had already been rendered to Julius Cæsar, decreed, that to commemorate his many triumphs, should from him take the name of Augustus, which we call August. The Saxons called it *Weod-Monat-wead*, signifying a covering or garment, and thus they expressed the beauteous clothing of the ground in harvest.

Gule of August, or Lammas Day, is variously explained. *Gule*, from the Celtic or British *Wyl*, or *Gule*, signifies a Festival or Holiday, and explains Gule of August, to mean the holyday of St. Peter and Vincula in this month, when the people of England, in Roman Catholic times, paid their Peter pence. *Lammas* is by some, derived from Lamb-masse, because, on that day, the tenants who held lands of the Cathedral church in York, which is dedicated to St. Peter and Vincula, were bound, by their tenure, to bring a live lamb into the church at high mass; others trace it to the Saxon loaf-masse, or bread-masse, from the first-fruits offering referred to in the Calendar, (Aug. 1.)

The Anniversary of the Accession of the House of Brunswick to the British Throne, August 1, (1714), was formerly celebrated; "Dogget's Coat and Badge" rowed for on this day, annually, on the Thames, was bequeathed by Thomas Dogget, the comedian, in commemoration of the above event.

The Transfiguration, (Aug. 6,) festival was abolished, in England at the Reformation; but is still celebrated with much pomp and solemnity in the Greek and Latin churches.

The Assumption of the Virgin Mary, (July 15,) was formerly a great Festival; and, upon this day, it was customary to implore blessings upon herbs, plants, roots, and fruits. Wordsworth has some exquisite lines on the eve of this Festival—meditations amid the silent splendour of "the midnight moon," in Italy:

> The watchman on the battlements partakes
> The stillness of the solemn hour; he feels
> The silence of the earth, the endless sound
> Of flowing water soothes him; and the stars,
> Which in that brightest moonlight well nigh quenched,
> Scarce visible, as in the utmost depth
> Of yonder sapphire infinite are seen,
> Draw on with elevating influence
> Toward eternity, the attempered mind.
> Musing on worlds beyond the grave he stands,
> And to the Virgin Mother silently
> Breathes forth her hymn of praise."

St Roch's Day, (Aug. 16,) was formerly celebrated as a general Harvest-Home in England. Sir Thomas Overbury, (1630,) under the Franklin, says, "he allowes of honest pastime, and thinkes not the bones of the dead anything bruised, or the worse for it, though the country lasses dance in the churchyard after even-song. *Rock Monday*, and the wake in summer, shrovings, the wakeful ketches on Christmas Eve, the hoky, or seed cake, these he yeerely keepes, yet holds them no reliques of Popery."

Harvest-Home, from the Saxon *hærfest*, *q.d.* herb-feast, is defined by Ash, to be Harvest-Home, "the last load of the harvest, the feast at the end of the harves a song sung at the end of the harvest; the opportunity of gathering harvest treasure." With us, the festival is, doubtless, as old as agriculture. Thomson has left us this beautiful description of its rustic joys:—

> The harvest treasures all
> Now gather'd in, beyond the rage of storms,
> Sure to the swain; the circling fence shut up;
> And instant Winter's utmost rage defy'd,
> While, loose to festive joy, the country round
> Laughs with the loud sincerity of mirth,
> Shook to the wind their cares. The toil-strung youth,
> By the quick sense of music taught alone,
> Leaps wildly graceful in the lively dance.
> Her ev'ry charm abroad, the village toast,
> Young, buxom, warm, in native beauty rich,
> Darts not unmeaning looks; and where her eye
> Points an approving smile, with double force
> The cudgel rattles, and the wrestler twines.
> Age, too, shines out; and, garrulous, recounts
> The feats of youth. Thus they rejoice, nor think
> That, with to-morrow's sun, their annual toil
> Begins again the never-ceasing round.

Harvest-Home customs are too various for us to detail. "The Queen of Harvest," whom our artist has portrayed, was anciently brought home with the last load of corn; though an image was formerly thus richly dressed up, to represent the Roman Ceres, as recorded by Hentzner, in 1598, in a Harvest-home at Windsor. Here, too, are the pipe and tabor, the latter taken from the timbrel of Miriam, as an accompaniment to her song and victory after the passage of the Red Sea. In the distance is seen the Hock Cart, "with all its gear," commemorated by Herrick:—

> Come, sons of Summer, by whose toile
> We are the Lords of Wine and Oile,
> By whose tough labours and rough hands,
> We rip up first, then reap our lands,
> Crown'd with the ears of corne, now come,
> And to the pipe sing Harvest-home;
> Come forth, my Lord, and see the Cart,
> Drest up with all the country art.
> * * * * *
> About the Cart, heare how the rout
> Of rural younglings raise the shout;
> Pressing before, some coming after,
> Those with a shout, and these with laughter.

Bloomfield has left us a picture of Harvest-Home in Suffolk, where the foremost man in the field was honoured with the title of "Lord," and at "the Horkey" or Harvest-Home Feast, he collected money from the farmers and visitors, to make a "frolic" afterwards, called the "largess" spending; but in Bloomfield's time, this custom was going fast out of use. In his ballad—the Horkey, he sings:—

> Home came the jovial *Horkey Load*,
> Last of the whole year's crop;
> And Grace among the green boughs rode,
> Right plump upon the top.

Leasing or Gleaning, dates from three thousand years and upwards, as testified by Ruth. "If it were not then first instituted, it was secured and regulated by an especial ordinance of the Almighty to the Israelites in the wilderness, as a privilege to be fully enjoyed by the poor of the land, whenever their triumphant armies should enter into possession of Canaan. By this law, in the field where the corn grew, 'clean riddance' was not to be made, the corners were to be left unreaped, and even the forgotten sheaf was not to be fetched away by the owner, but to be left for the 'poor and the stranger, the fatherless, and the widow'"

St. Bartholomew's Day (August 24), is now kept as a holiday at the Bank, and certain Law Offices. Many centuries since, labour was forbidden on this day; and subsequently, only Harvest-work was allowed by law. I. T.

AUGUST.

Young broods of goldfinches are now seen; lapwings congregate, as also do linnets; the nuthatch chatters; the wryneck departs; the aberdevine, the mountain finch, the crossbeak, the turnstone, and the knot arrive; and birds reassume their Spring notes.

The nuthatch is six inches in length. A black line passes over each eye from the bill, extending down the side of the neck as far as the shoulder; all the upper part of the body is of a fine blue-grey colour; the cheeks and chin are white; breast and belly of a pale orange colour. The aberdevine is in length nearly five inches. Top of the head and throat, black; over each eye there is a pale yellow streak; back of the neck and the back yellowish olive; rump yellow; under parts greenish yellow. The crossbeak is nearly seven inches in length. It will be readily distinguished by the upper and lower mandibles crossing each other at the points; its general colour is reddish on the upper parts; belly white. The turnstone is eight inches in length—and it is a prettily variegated bird. The ground colour of the head and neck is white, with small spots on the crown and hinder parts; a black streak crosses the forehead to the eyes.

FEMALE. GROUSE. MALE.

We have above given an engraving of black grouse, the male and the female, though at this time, or before, the sexes have separated and live in flocks apart.

The male is a bird of considerable size, being in length nearly two feet, and its stretch of wings is nearly three feet; and when in prime condition, which is during the early parts of the Winter, it weighs from three to four pounds. The bill is short and very strong; the eyes vary in different lights, from hazel to blue; over the eye is a naked space of very bright scarlet colour, and granulated; under the eye there is a similar one of a white colour. The one above the eye is much dilated in the breeding season, and frequently extends to the top of the head. The patch under the eyes, in old birds, is very conspicuous, but in young birds it is scarcely visible till after the second year. The general colour of the plumage is a deep black, with rich reflections of purple, blue, and bronze green. The blue is finest on the neck, and the green on the feathers of the tail. The under part is black with the exception of the under tail coverts, which are white. A spot on the wing, the tip of the bastard wing, the bases of the quills, except the first four, and the tips of some other quills are also white; forming a bar of white across the wings, as seen in the engraving. The wings are broad; and the tail consists of sixteen feathers, the external ones a little produced, and curling outwards, so as to give them that peculiar form as seen above. The female, as will be observed, differs very considerably in size, and also in colour; the general colour being brown, deeper on the back than any other part, and mottled all over with black; the tail is not so much produced, and the forked form is scarcely perceptible. The weight is about two pounds four or five ounces.

In Autumn and Winter the males live in flocks and at peace, but on the return of Spring they assemble in great numbers, on the tops of high and heathy mountains; they having put on the rich glosses of their nuptial plumage, begin to fight for superiority, as is the case with all polygamous birds. This fight continues with great bitterness till the vanquished are put to flight. The victors then perch on the tops of high trees or other elevated spots, and by crowing and clapping their wings, give notice to the females, who soon resort to them. It is said that each cock has two or three hens, which seem particularly attached to him. The nest is made on the ground; the female does not perch till her brood are able to perch with her. During this time the males remain in the close vicinity of the females, watching them and their broods with great attention; until they are matured, when he joins the other males for the season of celibacy.

The young cocks at first resemble the mother, the external distinctions of sex not appearing till the end of Autumn.

SWALLOW-TAIL BUTTERFLY.

Insects are very numerous; the above is one of great beauty; it is of a brilliant yellow, with black spots along the upper edges of the larger wings; all the wings are bordered with a deep edging of black, decorated by a double row of crescent-shaped spots, of which the lower row is yellow, and the upper blue. The under wings are tailed, and are marked at the inner angle with a round red spot, edged with blue and black.

THE LARVA OR CATERPILLAR OF THE SWALLOW-TAILED BUTTERFLY.

The caterpillar is of a green colour, encircled with numerous black bands, spotted with red, and is furnished on the top of the head with a pair of short tentacula of a red colour—which it occasionally protrudes from that part. It feeds principally on fennel, and it is sometimes found on rue; in the month of July it changes into the chrysalis state.

THE CHRYSALIS OF THE SWALLOW-TAILED BUTTERFLY.

The colour of the chrysalis is of a yellowish-grey; it is generally affixed to some part of a plant, or other neighbouring substance; and from this state, in this month, the complete butterfly, as represented and described above, proceeds.

The Peacock butterfly is very common. The wings are angular, spotted with black, and on each there is a large blue eye. The caterpillar from which it proceeds is black, with many white spots. It feeds principally on the nettle, and changes into the chrysalis in July, and the butterfly appears in August. Mr. White, in his *History of Selborne*, records an instance of seeing this insect on March 6th. We now proceed to describe the Atalanta butterfly. Its wings are black, upper pair with a red band and white spots, the lower ones bordered with red behind. The caterpillar from which this beautiful insect proceeds, is brown and shiny, and feeds on nettles—it changes into a chrysalis in July; the butterfly appearing in August.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S.	Sun. Declination North	Moon. Rises—R. Sets—S.	Moon. Souths.	Moon. Age	High Water at London Bridge. Morning.	High Water at London Bridge. Afternoon	Equation of Time. Subtract.	Day of the Year
			H. M.	° ′	H. M.	H. M	D.	H. M.	H. M.	M. S.	
1	Tu	Partridge shooting begins—*St. Giles*—St. Giles	5 13 R	8 20		8 28	11	9 13	9 56	0 4	244
2	W	was a native of Greece, and became Abbot of Nismes in 715. He literally	6 44 S	7 59	Morning 1 6 S	9 27	12	10 37	11 20	0 23	245
3	Th	obeyed the scriptural injunction by selling his patrimony for the benefit of	5 16 R	7 37	2 23 S	10 25	13	11 54		0 42	246
4	F	the poor, and on one occasion gave his coat to a sick mendicant, who was	6 40 S	7 15	3 44 S	11 22	14	0 25	0 54	1 1	247
5	S	cured miraculously by putting it on. St. Giles thus became the patron saint of beggars and cripples. Mars rises at 5h. 26m. A.M., and sets at 6h. 48m.	5 20 R	6 52	5 9 S	Morning.	●	1 21	1 43	1 21	248
6	S	13TH SUNDAY AFTER TRINITY [P.M.	6 35 S	6 30	Afternoon.	0 18	16	2 8	2 31	1 41	249
7	M	Jupiter rises at 9h. 48m. P.M.	5 23 R	6 8	7 17 R	1 12	17	2 51	3 15	2 1	250
8	Tu	*Nativity of the Virgin Mary*	6 29 S	5 45	7 47 R	2 6	18	3 37	3 57	2 22	251
9	W	William the Conqueror died, 1087	5 26 R	5 22	8 22 R	3 0	19	4 20	4 40	2 42	252
10	Th	Mungo Park died, 1771	6 25 S	5 0	9 0 R	3 54	20	5 0	5 23	3 3	253
11	F	Thomson (Seasons) born, 1700	5 29 R	4 37	9 44 R	4 46	21	5 43	6 4	3 23	254
12	S	Length of the day 12h. 50m.	6 20 S	4 14	10 33 R	5 38	☾	6 30	6 53	3 44	255
13	S	14TH SUNDAY AFTER TRINITY	5 32 R	3 51	11 27 R	6 28	23	7 20	7 50	4 5	256
14	M	*Holy Cross*—Moscow burnt, 1812	6 16 S	3 28		7 17	24	8 28	9 10	4 26	257
15	Tu	Saturn rises at 5h. 28m. P.M., and sets at 3h. 4m.	5 35 R	3 5	Morning. 0 23 R	8 4	25	9 51	10 31	4 47	258
16	W	Fox died 1806, aged 57 [A.M.	6 12 S	2 42	1 23 R	8 50	26	11 9	11 46	5 8	259
17	Th	London and Birmingham Railway opened, 1838	5 38 R	2 19	2 25 R	9 34	27		0 15	5 29	260
18	F	Mercury rises at 4h. 8m. A.M.	6 7 S	1 55	3 26 R	10 17	28	0 38	1 0	5 51	261
19	S	Venus rises at 3h. 34m. A.M., and sets at 5h. 34m.	5 42 R	1 32	4 29 R	11 0	29	1 18	1 38	6 12	262
20	S	15TH SUNDAY AFTER TRINITY [P.M.	6 2 S	1 9	5 34 R	11 43	○	1 55	2 10	6 32	263
21	M	*St. Matthew the Apostle*	5 45 R	0 45	Afternoon.	Afternoon	1	2 25	2 42	6 53	264
22	Tu	New Post-office opened, 1829 [length	5 58 S	0 21	6 28 S	1 10	2	2 55	3 11	7 14	265
23	W	Porson died, 1808—Day and night of nearly equal	5 48 R		6 57 S	1 56	3	3 26	3 42	7 35	266
24	Th	Jupiter rises at 8h. 45m. P.M.	5 54 S	South. 0 25	7 28 S	2 44	4	3 57	4 13	7 56	267
25	F	Mars rises at 5h. 21m, A.M.	5 51 R	0 48	8 7 S	3 35	5	4 29	4 47	8 16	268
26	S	Saturn rises at 4h. 43m. P.M., and sets at 2h. 17m.	5 50 S	1 11	8 53 S	4 27	6	5 3	5 24	8 36	269
27	S	16TH SUNDAY AFTER TRINITY [A.M.	5 55 R	1 35	9 48 S	5 22	7	5 44	6 6	8 57	270
28	M	Sheriffs sworn—Length of day 11h. 48m.	5 45 S	1 59	10 50 S	6 18	☽	6 32	6 59	9 17	271
29	Tu	*St. Michael*—Michaelmas Day.—A grand festival	5 58 R	2 22	Morning.	7 14	9	7 32	8 10	9 36	272
30	W	of the Romish and English churches, established 487, in honour of St. Michael and all the Holy Angels.	5 41 S	2 45	0 1 S	8 10	10	8 54	9 38	9 56	273

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.					Days of the M.
Full Moon	5th.	1h.	16m.	P.M.	1
Third Quarter	12	11	42	A.M.	6
New Moon	20	3	34	P.M.	11
First Quarter	28	7	27	A.M.	16
Perigee	4	11		P.M.	21
Apogee	17	3		„	26

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

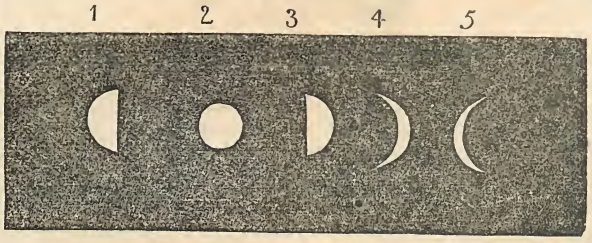
MERCURY. Right Ascension.	MERCURY. Declination North.	VENUS. Right Ascension	VENUS. Declination North.	MARS. Right Ascension.	MARS. Declination North.	JUPITER. Right Ascension.	JUPITER. Declination North.	SATURN. Right Ascension.	SATURN. Declination South.	URANUS. Right Ascension.	URANUS. Declination North.
9h. 55m.	10° 1′	8h. 59m.	17° 39′	10h. 54m.	8° 12′	4h. 54m.	21° 50′	21h. 58m.	14° 11′	0h. 51m.	4° 42′
9 56	11 37	9 24	16 3	11 5	6 57	4 57	21 53	21 56	14 18	0 50	38
10 11	11 45	9 48	14 15	11 17	5 41	4 58	21 56	21 55	14 25	0 50	34
10 36	10 19	10 12	12 18	11 29	4 24	5 0	21 58	21 54	14 32	0 49	4 30
11 7	7 37	10 36	10 11	11 41	3 7	5 1	21 59	21 52	14 38	0 48	4 25
11 40	4 9	10 59	7 57	11 53	1 49	5 2	22 0	21 51	14 43	0 48	4 21

NOTE.—September 23rd. at about a quarter to 11 o'clock A.M., the Sun will be on the Equator, and, therefore, without declination.

SEPTEMBER.

MERCURY is a small Planet, but shines with a very bright white light, though, by reason of being always near the Sun, he is seldom to be seen with the naked eye. The times that he may be best seen in the present year, are the following:—On January 18th, he rises about one hour and a half before the Sun, and, therefore, for a few days before and after January 18th, at about 7 o'clock in the morning; on March 30th, he sets 1h. 53m. after the Sun, and, therefore, for a few days before and after that day, at about 7 o'clock in the evening; on May 16th, he rises at 3h. 34m. A.M., being about half-an-hour before the Sun only, so that the time is not favourable, but it is the best between March 30th and July 28th; on the latter day he sets at 8h. 45m. P.M., being about 55 minutes after the Sun has set. The next date is that of the 10th of this month, September, and it is by far the most favourable time during the whole year. The proper time for viewing him is about one hour before sunrise, between the 5th day and the 15th day; but even at these times, as he never occupies a dark portion of the heavens, it is necessary to know exactly where to look for him; on the 8th day of September he will be about one degree South of the star Regulus *(to find Regulus see the month of March.)* Before the 8th day he will be West of Regulus, and about 1½ degree South of that star, and after the 8th day he will be East of Regulus, and about 1½ degree South of it. With these directions the Planet will be easily found; and it will be much more easily seen at this time than in the evenings of March (the next best time to see him), in consequence of the strong twilight in that month. On November 22nd he will set about 55 minutes after the Sun, or, a few minutes before 5 P.M.; and lastly, for a few mornings, at 7 o'clock, after December 27th; on December 31st he will rise at about 6¼ A.M., being about 1h. 50m. before the Sun. At all other times during the year, he will either rise or set too near to the time of the Sun's rising or setting to be easily visible.

From what has preceded it is clear that Mercury, like Venus *(See the month of May)*, is always in that quarter of the heavens near the Sun. His greatest angular distance from the Sun, or his elongation, is between 16° and 29°; the least elongation during the present year, is that of 17° 55′, on the 11th day of this month; the greatest was 27° 12′. *(See July.)* When this Planet is at his greatest angular distance from the Sun, he is seen as a half-circle, and passing from this position behind the Sun, or on the opposite side of the Sun to that at which the Earth is, he appears like Venus more than a semicircle; and when he is in, above, or below, the straight line drawn from the Earth through the Sun to him, he would appear circular, and he is at that time at his superior conjunction with the Sun; when he appears on the other side of the Sun he appears again semi-circular, and passing then from this position before the Sun, his illuminated portion has the form



DIFFERENT APPEARANCES OF MERCURY DURING THE YEAR.

of a crescent, and which, like Venus, becomes narrower and narrower, and is at its smallest dimensions, at the time when he is in, above, or below, the straight line joining the Sun and the Earth, or at his inferior conjunction with the Sun. To those persons who have attended to the explanation of the phases of the Moon, these circumstances afford satisfactory evidence that he does not shine by his own light. The successive appearances of Mercury during the year, are represented in the accompanying engraving, and the days on which the illuminated portion of the Planet has these appearances are as follows:—

That marked 1, on	January 18th;
" "	May 16th;
" "	September 11th;
" "	December 31st.
That marked 2, on	March 6th;
" "	June 20th;
" "	October 7th.
That marked 3, on	March 30th;
" "	July 29th;
" "	November 23rd.
That marked 4, before	April 18th;
" "	August 25th;
" "	December 11th.
And that marked 5, after	April 18th;
" "	August 25th;
" "	December 11th.

The scale upon which these are laid down, is the double of that used in the representation of the phases of Venus, and to compare the two together it is necessary to halve the size of the above.

During this month that phenomena in our latitude, and in corresponding latitudes in the Southern hemisphere, of the Moon rising for several nights at nearly the same time, instead of rising about 50 minutes later every night, occurs, and as it is beneficial to the farmer, it has been called the Harvest Moon. It is the more striking the nearer the time of full Moon happens, to the time of the autumnal equinox; now it happens in this year, that the full Moon is as far removed as possible from the time of the equinox, that is, from the 20th of the month; in fact, that day is the day of new Moon, and the Moon, instead of rising only by 15 minutes later every night, will rise nearly 30 minutes later; for instance, on the 6th day she rises at 6h. 48m., and on the next evening she rises at 7h. 17m.; therefore, the Harvest Moon of this year will be the least beneficial to farmers, by giving them the least light after sun-set that it is possible for her at this time to give The Moon following that called the Harvest Moon, is called the Hunters' Moon, and as it is removed but a little farther from the equinox than the Harvest Moon, it will be nearly under similar circumstances to that Moon, and, therefore, for several nights this year the Hunters' Moon will rise only about 35 minutes later night by night. *(See time of Moon rising, October 5th, 6th, 7th, &c.)*

Mercury, on the 1st day, rises in the E. by N. at 4h. 14m., A.M., and on the 15th day he rises midway between the E. by N., and the E.N.E., at 3h. 58m. A.M., and on the last day he rises in the East at 5h. 24m. A.M.; the directions for finding him are explained above.

Venus is still a morning star; she rises E.N.E., till near the end of the month, and in the E. by N. at the end. On the 1st day, at 2h. 42m. A.M.; on the 15th day, at 3h. 23m. A.M.; and on the last day, at 4h. 9m. A.M. On the 1st day she is nearly in the same place as on October 31st; on the 15th day she is about two degrees W. of Regulus, being near Mercury; and on the last day, Venus, β Leonis and Regulus form a triangle, she being 11 degrees S.S.E. of β Leonis, and about 21 degrees W. of Regulus.

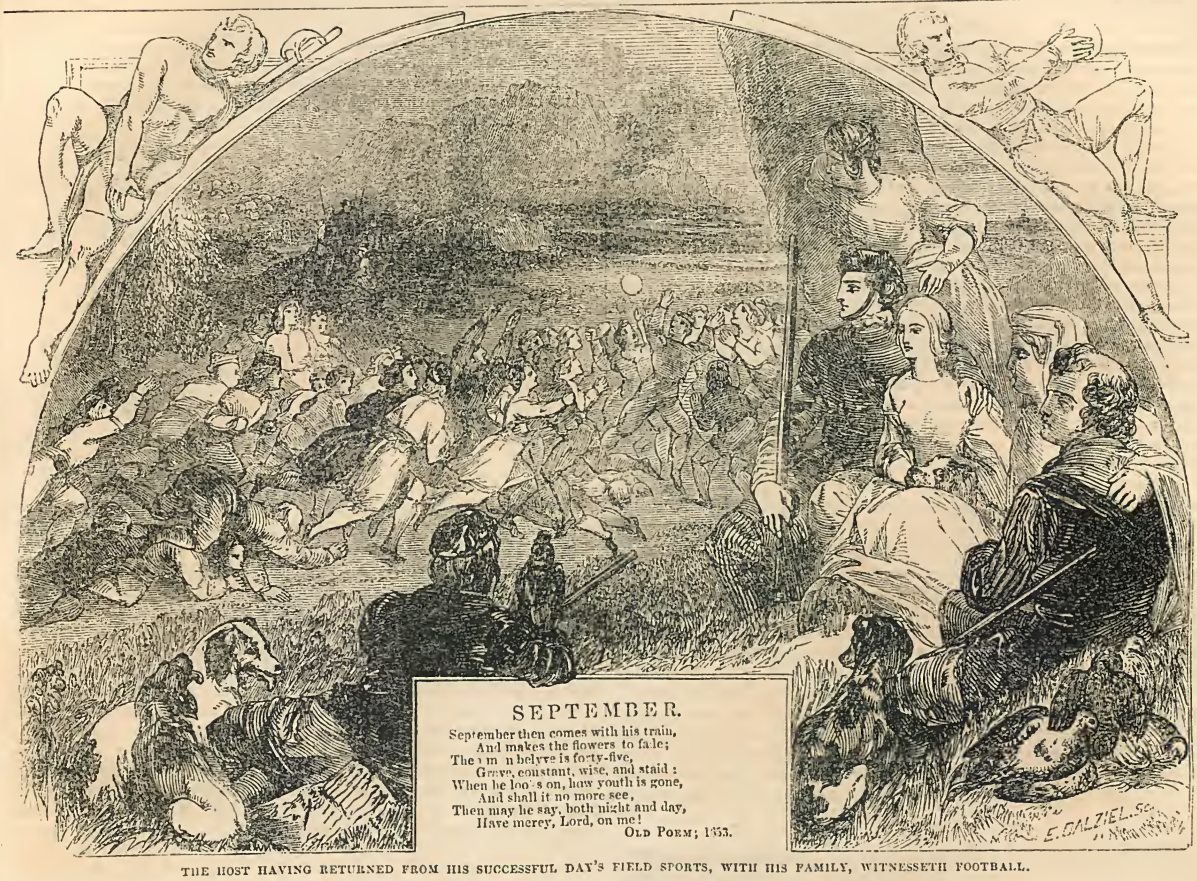
ASTRONOMICAL OCCURRENCES IN SEPTEMBER.

PLANETS. Names	Time of passing the Meridian or Southing on the 15th day	When near the Moon	Distance from the Moon, North or South
	H. M.	D. H.	DEG.
Mercury	10 54 A.M.		
Venus	10 32 "	18 8 P.M.	6 North
Mars	11 50 "		
Jupiter	5 24 "	12 4 A.M.	3 North
Saturn	10 16 P.M.	3 0 P.M.	6 South
Uranus	1 15 A.M.		

JUPITER'S SATELLITES. Eclipses of	
1st. Sat. Immersion	2nd. Sat. Immersion and Emersion
D. H. M.	D. H. M.
8 11 17 P.M.	2 0 8 A.M.
16 1 11 A.M.	9 0 11 }
23 3 4 "	9 2 46 } "
30 4 58 "	16 2 49 "
	3rd. Sat.
	10 11 42 P.M.
	18 1 30 } A.M.
	18 3 42 }

OCCULTATIONS OF STARS BY THE MOON. Names of the Stars.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
	D. H. M.	
ρ¹Sagittarii	1 9 18 P.M.	Dark
	1 10 24 "	Bright
M Tauri	12 3 12 A.M.	Bright
	12 4 28 "	Dark

September 3rd, 5h. P.M., Mercury stationary with respect to the fixed Stars. *(See above)*
September 10th, 9h. P.M., Mars in conjunction with the Sun.
September 11th, 8h. A.M., Mercury at his greatest W. elongation, 18 degrees. *(See above.)*
September 14th, 7h. A.M., Mercury at his least distance from the Sun.
September 20th, 4h. A.M., All four of Jupiter's Satellites on the East side of the Planet.
September 23rd, 8h. A.M., Venus at her least distance from the Sun.
September 23rd, 10h. A.M., Sun enters Libra, and Autumn commences.



SEPTEMBER.

September then comes with his train,
And makes the flowers to fade;
The time betwyxe is forty-five,
Grave, constant, wise, and staid:
When he loos'es on, how youth is gone,
And shall it no more see,
Then may he say, both night and day,
Have mercy, Lord, on me!

OLD POEM; 1553.

THE HOST HAVING RETURNED FROM HIS SUCCESSFUL DAY'S FIELD SPORTS, WITH HIS FAMILY, WITNESSETH FOOTBALL.

SEPTEMBER was named to mark its position of seventh (*Septem*), month in the Alban Calendar—and from *imber*, (shower); it being the commencement of the wet season in Rome. The Saxons called it *Gerst Monath*; *gerst*, or barley, being then in perfection. After the establishment of Christianity, this month was called by the Saxons *Halig-Monath*, the Holy Month, from the numerous religious ceremonies observed in the course of it.

The Anniversary of the Great Fire of London, Sept. 2, (1666) is, to this day, kept as a Holiday at the Bank, Customs, and Excise.

Bartholomew Fair is held on September 3, St. Bartholomew's Day, in the Old Style: it originated in two fairs or markets, one for the clothiers of England, and drapers of London, granted to the Prior of the Convent of St. Bartholomew, and held within the churchyard: the other granted to the City of London for cattle and goods, held in the field of West Smithfield. For many years, the Fair lasted fourteen days, and was a great source of revenue to the Corporation: in 1735, it was restricted to three days, and it now extends but to one day.

Holy Rood, or Holy Cross Day, (September 14), is still observed as a Holiday, to commemorate the recovery of the Cross, which had been carried away by the King of Persia when he plundered Jerusalem, and was brought back in triumph by the Emperor *Heraclius*.

Nutting was formerly customary throughout the country, on this day; and, for centuries past, the boys of Eton School have written verses, and had a holiday for nutting, in this month.

September 18th is kept as a Holiday; and the Salisbury Breviary has on this day: "Keep always the Fast of the 9th month."

St. Matthew's Day, (September 21), the Lord Mayor and Aldermen of London visit Christ's Hospital in state, when orations are delivered in the great Hall by the senior boys, who are qualifying for college. The suppers on Sundays in Lent, are other public sights of this Hospital, "the noblest Institution in the world."

Michaelmas Day (Sept. 29), was instituted in the year 487, to commemorate the Ministry of St. Michael and all Holy Angels, the messengers of good-will toward men. It is a Holiday at the Public Offices: and in the Court of Exchequer, there is on this day performed a ceremony, by one of the Aldermen of London, of chopping sticks and counting hob-nails, as suit and service of certain ancient tenures. The custom of eating goose on Michaelmas Day, has much exercised the ingenuity of antiquaries; and is traced by some to a goose being the dish before Queen Elizabeth, when the news was brought of the defeat of the Spanish Armada. A more probable reason is, that Michaelmas Day was a great festival, and geese were then most plentiful; and it being one of the quarters, or terms, for the payment of rents, a fat goose was the customary present, though, as it would appear, from the tenant to the landlord:—

And when the tenauntes come to pay their quarter's rent,
They brynge some fowle at Midsummer, a dish of fish at Lent
At Christmasse a capon, *at Michaelmas a goose*,
And somewhat else at New Year's tide *for feare their lease fro loose*.

A later poet says:—

At Michaelmas, by custom right divine,
Geese are ordained to bleed at Michael's shrine.

In the autumnal garden, the day is florally commemorated:—

The Michaelmas Daisy, among the dead weeds,
Blooms for St. Michael's valorous deeds.

Harvest-home customs still linger, though they scarcely deserve the name of that festival, when, as Pope says:—

Our rural ancestors, with little blest,
Patient of labour when the end was rest,
Indulged the day that housed their annual grain
With feasts, and offerings, and a thankful strain:
The joy, their wives, and sons, and servants share,
Ease of their toil, and partners of their care:
The laugh, the jest, attendants on the bowl,
Smoothed every brow, and opened every soul!

Hunting has now commenced: the welkin begins to ring with the music of hounds; and the sound of distant guns may be heard in a country of game. Hunting was formerly commenced at day-break:—

Oft listening how the Hounds and Horn
Cheerly rouse the slumbering morn,
From the side of some hoar hill
To the wild woods echoing shrill!

Somerville has left us an animated sketch of a morning in Autumn, preparatory to "throwing off the pack:"

Now golden Autumn from her open lap
Her fragrant bounties showers; the fields are shorn;
Inwardly smiling the proud farmer views
The rising pyramids that grace his yard,
And counts his large increase; his barns are stored,
And groanings taddles bend beneath their load.
All now is free as air, and the gay pack
In the rough bristly stubbles range unblamed;
No widow's tears o'erflow, no secret curse
Swells in the farmer's breast, which his pale lips,
Trembling conceal, by his fierce landlord awed:
But courteous now he levels every fence,
Joins in the common cry, and halloos loud,
Charmed with the rattling thunder of the field

Again:—

The horn sonorous calls, the pack awaked,
Their matins chant.
My courser hears their voice; see there with ears
And tail erect, neighing, he paws the ground;
Fierce rapture kindles in his reddening eyes,
And boils in every vein.

Our classic artist has depicted the host returned from sports with "hawk and hound," to witness the foot-ball match, first mentioned in the reign of Edward III. It was mostly played by "sturdie plowmen, lustie, strong, and bold;" or as the courtly Waller sings:—

A sort of lusty shepherds try
Their force at foot-ball; care of victory
Makes them salute so rudely breast to breast,
That their encounter seems too rough for jest.

Sometimes, pease and horse-beans were put into the ball, a blown bladder; and then,

It ratleth, soundeth, and shineth clear and fayre,
While it is thrown, and caste up in the ayre,
Each one contendeth and hath a great delite
With foote and with hande the bladder for to smite;
If it fall to the grounde, they lift it up agayne,
And this waye to labour they count it no payne.

Formerly, money was given at weddings for foot-ball play; and about a century since, matches of foot-ball were played in the Strand, where the May-pole streamer flaunted in the breeze.

SEPTEMBER.

During this month, stone curlews clamour; wood owls are noisy; the flycatcher, black cap, nightingale, white throat, depart, and the woodcock returns, &c.

The partridge is in length about thirteen inches, and weighs about fifteen or sixteen ounces—the female about two ounces less; the breadth, when the wings are spread, is about twenty inches; the bill is hard, and light-brown; the eyes are hazel, and they are partly surrounded by a warty skin, which is placed principally behind the eye, and continues nearly half round it; the general colour of its plumage is brown and ash, elegantly mixed with black, and each feather is streaked down the middle with buff colour; the chin, cheeks, and forehead are tawny, and being palest in the females. Between the eye and the ear is a portion of naked skin of a bright scarlet, which is not very conspicuous, except in old birds; on the breast is a chesnut mark in the form of a horse-shoe (see the engraving); this the female wants for the first two years, but, after that time, it is not nearly so good a distinguishing mark as is the bare skin round the eye, which, in the female, always inclines to a dull crimson, and never to that bright scarlet which it does in the male. The legs are yellowish in the young, and, as they increase in age, become grey; those of the male are furnished with a blunt spur or knob behind. The general colours are alike in both sexes. The age of partridges is discovered by the bill and legs; and another method is, from the appearance of the last feather on the wing, which is pointed after the first moult, but in the following year is quite round. We may remark here, that the feathers on the body are double, two feathers proceeding from the same quill; the inner one which is much the smallest, has two webs projecting from each side of the shaft.

COMMON PARTRIDGE.

Insects are still numerous; moths, among which is the death's-head moth butterflies, beetles, grasshoppers, field bugs, and flies, abound. The caterpillar of the privet-hawk-moth may now be found on privet, and that of the glow-worm on

MALE CRANE-FLY: TIPULA HORTORUM.

heaths and banks. During this month, and the next, crane-flies are abundant, particularly in pastures, where they rise in swarms on being approached; these creatures are found through the whole summer, but less numerous than they are at this time. They are popularly termed daddy-long-legs, tailors, &c.; and are often found of nearly an inch in length, from head to tail; their bodies are very slender, and are composed of nine rings. The above is a drawing of the male, and the following is that of the female.

FEMALE CRANE-FLY: TIPULA HORTORUM.

Their bodies are of a brownish colour, and their corselets are so elevated, that they appear hump-backed; the head is small, and the neck very short; the eyes are so large that they nearly cover the whole surface of the head. Each ring of the body is composed of two half cylinders, which are joined into one by means of a membrane, which gives them room to extend them or to close them at will. The horn at the extremity of the tail is the characteristic of the female, by means of which it deposits its eggs a short depth in the ground. It is curious to see them thus engaged, the body being vertical and moves up and down each time an egg is deposited, of which each female lays several hundred, passing over a considerable distance during the operation.

The beauties of Autumn, during this month, may be expected, and the beautiful tints on the foliage of trees and plants, cannot escape the most casual observer.

Autumn tinges every fertile branch
With blooming gold and blushes like the morn.—Akenside.

In the month of July, we spoke of one species of fungus, the order is divided into many sections. That called Agaricus, is distinguished by the under part of the cap having parallel plates, called gills, within which the seeds are placed. That called Boletus, has tubes or circular cells instead of gills. And it is this striking difference that distinguishes it from the mushroom. The boletus, too, is of a circular form; the puff ball is well known, and it has its seeds internally. There are nearly three hundred different species of agarics in this country; of all these, one only has been selected for cultivation in our gardens, the "agaric campestris," or common mushroom. The gills are loose, pinky red, changing to a liver colour, in contact with the stem, but not united to it. Very thick set; the gills are white, changing to brown when old, and becoming scanty; regularly convex; fleshy, flatter with age; from two to four inches, and sometimes more, in diameter, liquefying in decay; the flesh white; the stem solid, white, and cylindrical, from two to three inches high, half an inch in diameter. When the mushroom first makes its appearance, it is smooth and nearly globular, and in this state it is called a button. Annexed is a drawing of the species agaric.

MUSHROOM: AGARIC.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination South ° ′	Moon. Rises—R. Sets—S. H. M.	Moon. Souths. H. M.	Moon. Age D.	High Water at London Bridge. Morning. H. M.	High Water at London Bridge. Afternoon. H. M.	Equation of Time. Subtract. H. M.	Day of the Year
1	Th	Pheasant shooting begins	6 1 R	3 9	Morning.	9 6	11	10 21	11 2	10 15	274
2	F	London University opened, 1828	5 38 S	3 32	2 38 S	10 1	12	10 37		10 34	275
3	S	King's College opened, 1831	6 5 R	3 55	3 59 S	10 56	13	0 6	0 35	10 53	276
4	S	17th Sunday after Trinity	5 32 S	4 18	4 19 S	11 50	○	0 59	1 23	11 12	277
5	M	Old Parr died 1635, aged 152	6 9 R	4 41	Afternoon.	Morning	15	1 46	2 8	11 30	278
6	Tu	Mercury rises at 5h. 57m. A.M., midway between	5 27 S	5 5	6 18 R	0 45	16	2 30	2 52	11 47	279
7	W	Zimmerman died, 1795 [the E. and E. by S.	6 12 R	5 28	6 54 R	1 39	17	3 14	3 34	12 5	280
8	Th	Venus rises at 4h. 30m. A.M. near the E.	5 22 S	5 51	7 38 R	2 34	18	3 56	4 16	12 22	281
9	F	*St. Denys*—Mars rises at 5h. 14m. A.M. near the E.	6 16 R	6 14	8 26 R	3 28	19	4 36	4 57	12 38	282
10	S	Oxford and Cambridge Michaelmas Terms begin	5 18 S	6 36	9 18 R	4 20	20	5 16	5 38	12 54	283
11	S	18th Sunday after Trinity	6 19 R	6 59	10 13 R	5 11	21	6 0	6 24	13 9	284
12	M	Jupiter rises at 7h. 35m. P.M. near N.E.	5 13 S	7 22	11 13 R	5 59	☾	6 50	7 18	13 25	285
13	Tu	Length of Day 10h. 49m.	6 22 R	7 44	Morning.	6 46	23	7 49	8 29	13 39	286
14	W	Saturn sets at 1h. 2m. after midnight, near W.S.W.	5 8 S	8 7	0 15 R	7 31	24	9 10	9 49	13 53	287
15	Th	Murat shot, 1815	6 25 R	8 29	1 16 R	8 14	25	10 28	11 3	14 6	288
16	F	Houses of Parliament burnt, 1834	5 4 S	8 51	2 20 R	8 57	26	11 36		14 19	289
17	S	Uranus sets at 5h. 24m. A.M. a little N. of E.	6 28 R	9 13	3 22 R	9 39	27	0 3	0 25	14 31	290
18	S	19th Sunday after Trinity—*St. Luke the*	5 0 S	9 35	4 26 R	10 22	28	0 44	1 3	14 43	291
19	M	Evangelist.—A festival of the Church of England. This day was appointed to be St. Luke's festival, in the twelfth century.	6 31 R	9 57	5 32 R	11 6	29	1 20	1 37	14 54	292
20	Tu	Battle of Navarino, 1827	4 56 S	10 19	6 32 R	11 52	●	1 53	2 8	15 4	293
21	W	Battle of Trafalgar, 1805—Nelson killed	6 34 R	10 40	Afternoon.	Afternoon	1	2 26	2 44	15 14	294
22	Th	Irish Massacre, *1641*—40,000 killed	4 52 S	11 2	6 7 S	1 31	2	2 59	3 18	15 23	295
23	F	Royal Exchange founded, 1667	6 38 R	11 23	6 51 S	2 24	3	3 33	3 50	15 32	296
24	S	Mercury sets at 5h. 5m. P.M. near W.S.W.	4 47 S	11 44	7 43 S	3 18	4	4 9	4 26	15 39	297
25	S	20th Sunday after Trinity—*St. Crispin and*	6 42 R	12 5	8 43 S	4 13	5	4 45	5 6	15 46	298
26	M	St. Crispinian were two Roman youths, brothers, who in the third century went as Christian Missionaries to France, and preached for some time at Soissons. They supported themselves by working at the trade of a shoemaker by night, while they preached during the day.	4 43 S	12 25	9 51 S	5 9	6	5 28	5 50	15 53	299
27	Tu		6 46 R	12 46	11 4 S	6 4	☽	6 18	6 45	15 58	300
28	W	*St. Simon and St. Jude—a festival of the English*	4 39 S	13 6	Morning.	6 58	8	7 17	7 56	16 3	301
29	Th	Church. Simon remained with the other apostles till after the Pentecost; it has been surmised that he visited Britain and there suffered martyrdom.	6 50 R	13 26	0 19 S	7 51	9	8 38	9 20	16 7	302
30	F	Jude, otherwise called Thaddeus, suffered martyrdom in Persia.	4 36 S	13 46	1 36 S	8 44	10	10 1	10 40	16 11	303
31	S	*All Hallows Eve*—Hare Hunting begins	6 53 R	14 6	2 57 S	9 36	11	11 14	11 45	16 14	304

Times of changes of the Moon, and when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth, in each Lunation.					Days of the M.	RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS. Mercury. Right Ascension.	Mercury. Declination	Venus. Right Ascension.	Venus. Declination	Mars. Right Ascension.	Mars. Declination	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
Full Moon	4th	10h.	6m.	P.M.	1	12h. 13m.	0° 21′N	11h. 22m.	5° 58′N	12h. 5m.	0° 30′N	5h. 2m.	22° 0′	21h 50m.	14° 47′	0h. 47m.	4° 16′
Third Quarter	12th	4	8	A.M.	6	12 45	3 31s	11 45	3 13N	12 16	0 49s	5 2	22 0	21 50	14 51	0 46	4 11
New Moon	20th	7	44	,,	11	13 16	7 16s	12 8	0 46N	12 28	2 8s	5 2	22 0	21 49	14 54	0 45	4 7
First Quarter	27th	3	10	P.M.	16	13 47	10 49s	12 31	1 42s	12 40	3 26s	5 2	21 59	21 48	14 56	0 45	4 2
Perigee		3	7	A.M.	21	14 17	14 6s	12 54	4 10s	12 52	4 44s	5 0	21 58	21 48	14 58	0 44	3 58
Apogee		15	6	,,	26	14 47	17 4s	13 17	6 37s	13 4	6 2s	4 59	21 56	21 48	14 58	0 43	3 53
Perigee		31	4	,,													

OCTOBER.

DURING the month of October, Saturn is the only Planet favourably situated in the evening for observation; it can be readily found all the month, by conceiving an imaginary line drawn from γ Aquilæ, through β Aquilæ—*(See September)*—continued to the distance of about 32 degrees from α Aquilæ; Saturn is preceded by two Stars of the 3rd. magnitude, and there are no other Stars so bright as the 3rd magnitude near him. Persons who are not accustomed to Angular Measure, may estimate the distance from α Aquilæ to the Planet with great exactness, or any other distance expressed in degrees, by the following considerations. The distance between the pointers of the Pole Star, is 5 degrees—*(See January.)* The distance between the Pole Star and the Pointer nearest to it is 29 degrees. The distance between the three Stars in Orion—*(See March)*—is just 3 degrees, there being very nearly 1½ degrees between ϵ Orionis, the central Star, and the one on each side of it; the distance of α Orionis, from γ Orionis, in the same engraving, is 8 degrees; the distance between α Lyræ and α Aquilæ, is 35 degrees; the distance between α Aquilæ, and α Cygni, is 38 degrees; and by considering that the diameters of the Sun, and of the Moon, are each about half a degree, a very correct idea of the extent of space expressed by degrees, may be thus attained.

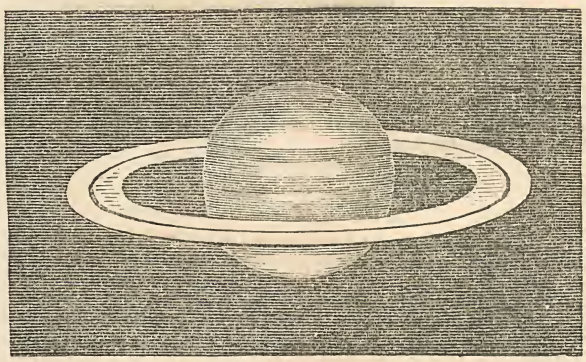
The Planet, Saturn, is distinguished from the other Planets, by being surrounded by a luminous double ring of great extent, and in consequence presenting some of the most curious phenomena in the heavens.

This ring sometimes appears continuous all round the body of the Planet; at other times the body of the Planet appears to repose between its extremities; and at other times he appears as other Planets do, without any ring whatever.

The ring is at a considerable distance from the body of the Planet, and is only luminous in consequence of its reflecting the Sun's rays; it is plain, therefore, that it cannot be visible when the Sun is on one side of it, and the Earth on the other; for then the observer on the Earth, would be looking at the dark side of the ring. It is, therefore, necessary for both the Sun and the Earth to be on the same side of the ring, to enable us to see it. It is also invisible at other times, first, when its edge is towards the Earth, for then none of its reflected light can reach us; and secondly, when its edge is towards the Sun, for the edge then can only be illuminated; the ring being very thin, the quantity of reflected light from its edge will scarcely render it visible.

Twice in each of Saturn's revolutions, that is, in 29 years, 5 months, and 14 days, the edge of the ring is towards the Earth, and, consequently, invisible to us.

During the present month the Sun and the Earth are on the same side of the ring, and the ring presents its North side towards us, and its appearance is represented in the following engraving.



TELESCOPIC APPEARANCE OF SATURN DURING THE YEAR 1846.

This month will be the best to observe the Planet for some years. Next year the ring will be so placed that we shall see less of it, and in a part of the year 1848, it will be invisible; afterwards it will show its Southern side.

The distance of Saturn from the Sun is about 900 millions of miles, and the Sun, as viewed at that distance, covers a space in the heavens of only about one-eightieth of that which the Sun appears to us to cover; and, consequently, Saturn derives but one-eightieth part of the light and heat that we do. The time of his revolution on his axis is 10h. 16m; the Sun, therefore, returns more than twice as soon to the Meridian of any place on his surface, as he does to any place on the Earth's surface; and the deficiency of light is abundantly supplied by the reflected ring. The Planet is attended by seven Satellites, but three only can be seen by powerful telescopes; the reflected light from the Satellites and the ring must be considerable.

The distance of the nearest part of the ring to the body of Saturn is 19,090 miles; the breadth of the interior ring is 17,176 miles; the space between the rings is 1,791 miles, and the breadth of the exterior ring is 10,573 miles, according to the micrometrical measures by Professor Struve. The thickness of the ring is less than 100 miles—*(See Memoirs of the Astronomical Society, Vol. III., page* 301) The diameter of the Planet is 79,160 miles. The ring, therefore, in width is more than one-third of the diameter of the Planet, and its thickness is scarcely discernible, so that, at times, when the edge of the ring is towards the Earth, a dark line only appears across the Planet.

Mercury rises in E. by N. on the 1st day, at 5h. 31m. A.M., and he is situated about 2° S. of Regulus. On the 15th day he rises in the E.S.E. at 6h. 54m. A.M; the Sun will have been, however, above the horizon at this time 27m.; he will set in the W.S.W. at 5h. 18m., being about 14m. after the Sun, so that this time is very unfavourable for seeing him, and it continues unfavourable during the remainder of the month.

Venus rises in the E. by N. point of the horizon on the 1st day at 4h. 11m. A.M., and she with β Leonis and Regulus form a triangle, being 11° S.S.E. from β Leonis, and 22° W. of Regulus. On the 15th day she rises in the E. at 4h. 54m. A.M.; she is situated nearly in a line with β Leonis and α Virginis, and close to that remarkable double star γ Virginis; being 15° from α Virginis, and 20° from β Leonis. On the last day of the month she rises in the E. by S. at 5h. 45m. A.M., and she is situated about 6° W. of α Virginis.

Mars rises at the beginning of the month in the E., and towards the end of the month in the E. by S. points of the horizon; on the 1st day at 5h. 17m. A.M.; on the 15th day at 5h. 14m. A.M., and the last day at 5h. 12m. A.M. On the 1st day he is situated in a line drawn from the Pole Star through δ Ursæ Majoris *(See January)* continued to 89° from the Pole Star, or to a point 11° S.S.W. of β Leonis; on the 15th day he is situated in a line from the Pole Star through ϵ Ursæ Majoris to 93° from the Pole Star; and he is nearly in a line with α Virginis and β Leonis, being 11° from α Virginis, and 24° from β Leonis. On the last day of the month he is about 3° N. of α Virginis.

Jupiter rises in the N.E. by E. throughout the month at 8h. 14m. A.M. on the 1st day; at 7h. 19m. A.M. on the 15th day; and at 6h. 12m. A.M. on the last day.

The following is the position of the Constellations, that are rising; on the meridian; and setting on the 1st day at midnight.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Leo Minor in N.N.E.	ϵ Ursæ Major 18° above N. of horizon	Corona Borealis in N.W. by N.
Cancer in N.E. by E.	Draco 30° above N. of horizon	Herculis in N.W. by W.
Canis Minor in E. by N.	Cassiopiæ between Polaris and the Zenith	Ophnichus in W.N W.
Monoceros in E.	Andromeda 15° S. of the Zenith	Capricornus in W.S.W.
Orion in E. S. E.	Pisces 65° above the S. horizon	Pisces Australis in S.W. by S.
Lepus in S.E. by E.	Cetus 20° above the S. horizon	

ASTRONOMICAL OCCURRENCES IN OCTOBER.

PLANETS. Names	Time of passing the Meridian or Southing, on the 15th day	When near the Moon	Angular distance from the Moon North or South
	H. M.	D. H.	DEG.
Mercury . . .	0 6 P.M.		
Venus . . .	10 52 A.M.	19 4 A.M.	3 North
Mars . . .	11 3 „	19 6 A.M.	2 North
Jupiter . . .	3 29 „	9 2 P.M.	3 North
Saturn . . .	8 13 P.M.	1 11 „	7 South
Uranus . . .	11 8 „	5 1 A.M.	2 South

JUPITER'S SATELLITES. Eclipses of		
1st. Sat. Immersion	2nd. Sat. Immersion	
D. H. M.	D. H. M.	
1 11 26 P.M.	3 9 20 P.M.	
	10 11 57 „	
9 1 20 A.M.	18 2 34 A.M.	
	25 5 11 „	
	3rd. Sat. Immer. and Emer.	
16 3 13 „		
17 9 42 P.M.		
23 5 7 A.M.	23 9 26 } P.M.	
	23 11 42 }	
24 11 36 P.M.	31 1 26 } A.M.	
	31 3 43 }	

OCCULTATION OF STARS BY THE MOON. Names of the Stars	Time of disappearance and re-appearance of the Star	At the dark or bright limb of the Moon
	D. H. M.	
119 Tauri }	9 10 24 P.M.	Bright
}	9 11 0 „	Dark
120 Tauri . }	9 10 52 P.M.	Bright
}	9 11 46 „	Dark
λ Geminorum . }	11 10 56 P.M.	Bright
}	11 11 41 „	Dark

October 4th. Jupiter's Satellites all from East of the Planet, and on the 14th. day West of him, at about 4h. in the morning.
October 7th. 11h. P.M., Mercury in superior conjunction with the Sun—*(See September)*
October 19th., the Sun Eclipsed; but it is not visible in the British Isles.
October 23th. 6h A.M., Mercury at his greatest distance from the Sun.

THE HOST AND HIS FAMILY SPECTATORS OF THE MYSTERIES OF ALLHALLOW EVEN.

October, though from the age of Numa it has been the tenth month of the year, derives its name from its original position in the Alban Calendar; being compounded of *Octo*, eight; and *imber*, a shower. The Saxons called it *Wyn Monath*, or the Wine-Month; and also, *Wynter-Fyllyth*, from the approach of Winter.

St Denys, (October 9), is the tutelar Saint of France: his reliques are enshrined in the superb abbey-church near Paris.

St. Wilfrid, (Oct. 12), was Archbishop of York, and founded the monastery of Ripon, where his body was buried, in 709, in the church of St. Peter: he is reputed to have invented the gamut; and his Festival is annually kept at Ripon on the Sunday after Lammas Day, on the eve of which feast is a procession, in which the fiddle is not forgotten.

St. Ethelburgh's Day, (Oct. 11,) was formerly a monastic and rural feast: amidst the annual store of provision at Barking Nunnery, occurs "wheat and milk for Frimitie, (Furmety,) upon St. Alburg's, (St. Ethelburgh's,) Day.

St. Luke, (October 18), is the patron of painters, from his reputed skill in painting, especially in portraits of Our Saviour: the usual oath of King William Rufus was *by the face of Christ*, depicted by St. Luke. His day is still kept at the Public Offices.

S. S. Crispin and Crispinian's Day, (October 25), is but slightly observed. Shakspeare has perpetuated the memory of this Festival by the speech which he has given to Henry V., before the battle of Agincourt:—

This day is called the Feast of Crispian:
He that outlives this day, and comes safe home,
Will stand a-tiptoe when this day is named,
And rouse him at the name of Crispian:
He that shall live this day, and see old age,
Will yearly, on the vigil, feast his neighbours,
And say to-morrow is St. Crispian.

Both Saints are said to have been Romans of noble family, put to death in the persecution under Diocletian, at Soissons, in Gaul. Their bodies were afterwards translated to Rome, and interred in St. Lawrence's church; they are, also, traditionally stated to have been buried near Lydd, in Kent, where a heap of stones is to this day called "Crispin's Grave."

St. Simon and St. Jude's Feast, (October 28), was superstitiously considered rainy, as well as that of St Swithin; and this, probably, because the autumnal rains began on or about that day. In an old play occurs: "I know it as well as I know 'twill rain on Simon and Jude's Day." In another old play occurs: "Now a continued Simeon and Jude's rain beat all your feathers as flat down as pancakes." And, we learn from Holinshed that, in 1536, when a battle was appointed to have been fought upon this day between the King's troops and the Rebels in Yorkshire, that so great a quantity of rain fell upon the eve thereof, as to prevent the battle from taking place.

Allhallow Even, (October 31), the great festival of the month, the vigil of All Saint's Day, with all its revels, is depicted by our artist. Here is the sport of flinging nuts into the fire, to propitiate omens touching matrimony; when, if the nuts lie still, and burn together, they prognosticate a happy marriage or hopeful love; if, on the contrary, they bounce, and fly asunder, the sign is unpropitious: such is the custom in the North, where it is called Nutcrack Night; in Ireland there is a similar custom: and Burns has commemorated its "sports, cheep and cheery" in the West of Scotland:—

Some merry, friendly, countra folks
Together did convene
To burn their nits, and pou their stocks,
And haud their Hallowe'en
Fu' blythe that night.

Another sport was to dive for apples, and to catch at them when stuck upon the ends of a stick, crossed by another with lighted candles at the ends; and that with the mouth only, their hands being tied behind the players' backs. There were also on Allhallow E'en, various divinations, eating the apple at the glass, running round the stack three times, bonfires, ringing of bells, and feasting.

With this month begins *Pheasant-shooting*, of which Pope has given a touching picture:—

See! from the brake the whirring pheasant springs,
And mounts exulting on triumphant wings:
Short is his joy, he feels the fiery wound,
Flutters in blood, and panting beats the ground,
Ah! what avail his glossy varying ayes,
His purple crest, and scarlet-circled eyes;
The vivid green his shining plumes unfold,
His painted wings, and breast that flames with gold!

Change, the characteristic of Nature, is never better seen than in this month, lecturing us with its scenes of falling grandeur. Dr. Johnson revelled in these meditative musings, from Pope's translation of Homer:—

Like leaves on trees, the race of Man is found,
Now green in youth, now withering on the ground;
Another race the following Spring supplies,
They fall successive, and successive rise;
So generations in their course decay,
So flourish these when those are passed away.

The Swallow has now left us, having staid:—

Till frowning skies began to change their cheer,
And time turn'd up the wrong side of the year;
The shedding trees began the ground to strow
With yellow leaves, and bitter blasts to blow:
Such auguries of winter thence she drew,
Which by instinct or prophecy she knew;
When prudence warn'd her to remove betimes,
And seek a better heaven and warmer climes.
Dryden.

At the close of the month begins Hare-hunting; Thomson has stigmatised this sport as "the savage soul of game:"

Poor is the triumph o'er the timid Hare!
. . . . . .
O'er a weak, harmless, flying creature, all
Mix'd in sad tumult, and discordant joy.

Winter is now approaching:—

October winds, wi' biting breath,
Now nip the leaf that's yellow fading;
Nae gowans glint upon the green,
Alas! they're co'er'd wi' winter's sneading.
As through the woods I musing gang,
Nae birdies cheer me frae the bushes,
Save little Robin's lanely sang,
Wild-warbling where the burnie gushes.
J. Scadlock. I. T.

OCTOBER.

Several migratory birds leave this month; the redwing, fieldfare, royston crow, wood pigeon, and snipe, arrive; broods of goldfinches appear, &c.

The goldfinch is in length nearly five inches; and weighs about an ounce: its bill is white with a blackish tip, and of a conical form; the forehead and throat are of a rich scarlet colour, with a black line passing between them from the bill to the eyes, which are black; the cheeks and the lower part of the neck white; top of the head black, which extends downwards, and divides the white on the cheeks from the white spot on the hinder part of the neck. The whole of the upper parts with the sides of the breast are of a bright yellowish brown; belly white; wings black, marked in the middle of each feather with gamboge yellow; rump whitish; six middle tail feathers, black with white tips; legs slender and of a pale brown.

THE GOLDFINCH.

The colours nearly similar in both sexes; those of the female are scarcely so vivid, and the wing coverts are inclined to brown. This bird is well known, and highly esteemed in every part of the kingdom, and it is very common throughout the country. The Count de Buffon says:—Beauty of plumage, melody of song, sagacity, and docility of disposition, seem all united in this charming little bird, which, were it rare, and imported from a foreign country, would be more highly valued; these qualities, together with its natural hardiness of constitution, all combine to make it a general favourite.

Its song, which may be heard at almost every season of the year, is brisk, lively well kept up, and extremely musical and cheerful.

The goldfinch's nest is a very beautiful structure; it is externally formed of moss, dry grass, and lichens, and lined with the down of thistles, hair, and wool. It usually lays four or five eggs, of a blueish-white colour, slightly spotted with dark purple at the largest end.

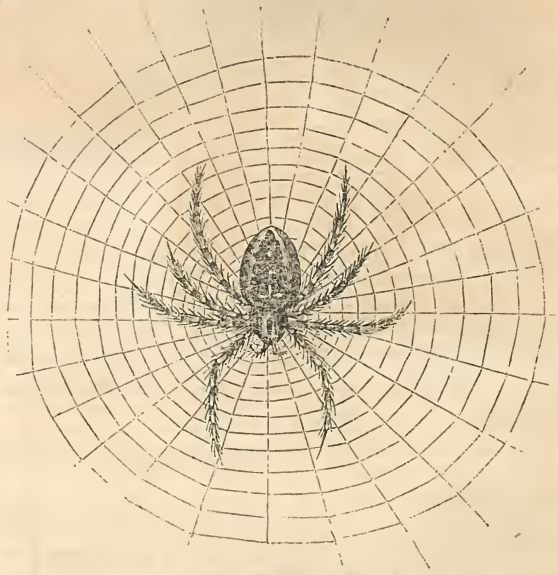
THE BULLFINCH.

The bullfinch is in length six inches; in breadth, when its wings are spread, about ten inches; and weighs near three-quarters of an ounce; bill short, very strong, and dusky. The upper mandible is much hooked, and sharp pointed; eyes large and black; the upper part of the head, and the ring round the bill, are of a fine glossy black, the back ash colour, the breast and belly red, wings and tail black, legs slender and dark brown, claws long and curved, colours very similarly disposed in both sexes. Those of the female are less bright, and the under parts of a reddish brown. Both sexes are very subject to alter in the colours of their plumage, frequently becoming quite black when kept in confinement.

The note of this bird is soft, and is far from unpleasant. It is so low that it frequently escapes observation. When confined it may be taught to whistle a variety of tunes; its note is usually called piping.

Spiders abound on every shrub; and when we consider that the spider is destitute of a distinct head; without horns; one half of its body attached to the other by a very slender connexion, and so soft as not to bear the least pressure; its limbs so slightly attached to its body that they fall off at a very slight touch; it appears ill adapted either to escape from danger which threatens it on all sides, or to supply itself with food; the economy of such an insect deserves notice.

They have usually five teats at the extremity of the abdomen, whose apertures they can enlarge or contract at pleasure. It is through these apertures a gummy fluid exudes, and it is of a yellow colour in the common garden spider, which we have delineated below. From each of these teats they discharge a thread. The first object a spider has to accomplish, is to attach its thread to some object, as the commencement of the ground work for its future operations. The web of the most common of the spider construction in this country, is that of the diadema, the common garden spider; its web consists of lines diverging at equal distances from the centre, which are then connected by a series of transverse bars; spiders in general station themselves at the centre of their webs, with their heads downwards. Annexed is a drawing of the garden spider in its web.



THE GARDEN SPIDER IN ITS WEB.

The colour is reddish brown, abdomen round, and marked with white spots in the form of a cross. The body varies much in colour from a darker to a lighter reddish-brown. The position of its eyes is · . : : . · It has eight legs. There are above a hundred species of this genus, which are separated into distinct sections, according to the number and position of their eyes.

In forming this web, the top line is first spun, the other outer threads of the frame-work are then added, and a cross line is then carried from one point of the web to another, exactly opposite. From the middle of this cross line, the insect ascends or descends, having first glued another thread at the centre, which it attaches to the outer lines, and then, going along the latter to a certain distance, it fastens the thread to one of the outer or frame lines. In this manner it constructs the diverging lines, next it attaches a thread to one of the lines proceeding from the centre, and then drawing it out with its hind legs, ascends along the line till it can lay hold of the next line, down which it descends, until it reaches a spot exactly opposite to where the thread was attached to the other line; it then quits its hold with the hind legs, and the thread is glued to the proper spot, and so on, till the whole web is completed. There are many other methods of weaving, peculiar to different species of spiders, and some that deserve particular attention. One other, that of the common house spider, we did intend to describe, but cannot do it for the want of room; but we would recommend our readers to notice it themselves.

During this month, there are but few additional flowers. We may enumerate the following—common ivy, on old walls; common pheasant's-eye, in cornfields; stinking geranium, by road sides; and even these few, towards the end of the month, soon fade away.

Fade, flowers! fade; nature will have it so;
'Tis but what we must in our autumn do!
And as your leaves lie quiet on the ground,
The loss alone by those that lov'd them found;
So in the grave shall we as quiet lie,
Miss'd by some few that lov'd our company:
But some so like to thorns and nettles live,
That none for them can, when they perish, grieve.—Waller.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S.	Sun. Declination South	Moon. Rises—R. Sets—S.	Moon. Souths.	Moon. Age	High Water at London Bridge. Morning	High Water at London Bridge. Afternoon	Equation of Time Subtract.	Day of the Year
			h. m.	° ′	h. m.	h. m.	d.	h. m.	h. m.	h. m.	
1	S	21st Sunday after Trinity—*All Saints*	6 56 R	14 25			12		0 13	16 15	305
2	M	*All Souls*—Michaelmas Term begins	4 31 R	14 44	Morning. 5 32 S	Afternoon 11 24	13	0 39	1 3	16 17	306
3	Tu	Mercury sets at 4h. 52m. P.M.—Mars rises at	6 59 R	15 3	6 50 S	Morning. 0 18	15	2 11	2 32	16 16	307
4	W	King William III. landed, 1688 [5h. 12m. A.M.	4 27 S	15 22	Afternoon. 6 13 R	1 13	16	2 53	3 14	16 15	308
5	Th	The Anniversary of the Discovery of the Gun-	7 2 R	15 40	7 6 R	2 7	17	3 34	3 54	16 13	309
6	F	powder Plot in 1605, celebrated in the Church of England by a form of	4 24 S	15 58	8 0 R	3 0	18	4 14	4 33	16 10	310
7	S	prayer with thanksgiving; but the day is chiefly noted by the triumph of	7 6 R	16 16	9 1 R	3 50	19	4 52	5 14	16 6	311
8	S	schoolboys over the effigy of Guy Fawkes	4 22 S	16 34	10 2 R	4 39	20	5 33	5 54	16 1	312
9	M	22nd Sunday after Trinity	7 9 R	16 51	11 4 R	5 25	☾	6 18	6 41	15 56	313
10	Tu	Lord Mayor's Day first instituted, 1453—Prince of Wales born, 1841	4 19 S	17 8	Morning. 0 6 R	6 9	22	7 8	7 29	15 49	314
11	W	*St. Martin's Day, or Martinmas*—Popularly this	7 12 R	17 25	0 6 R	6 52	23	8 13	8 52	15 42	315
12	Th	is one of the most remarkable days in the year, especially in Scotland, where	4 16 S	17 41	1 8 R	7 34	24	9 27	10 2	15 34	316
13	F	Whitsunday and Martinmas are the two great terms for leases and engage-	7 16 R	17 58	2 12 R	8 17	25	10 36	11 7	15 25	317
14	S	ments of servants, the latter being that at which the occupation of farms	4 12 S	18 13	3 17 R	9 1	26	10 37		15 15	318
15	S	usually commences. Martin is said to have been born in Lower Hungary,	7 20 R	18 29	4 22 R	9 46	27	0 2	0 24	15 4	319
16	M	about 316, and to have originally been a soldier	4 10 S	18 44	5 30 R	10 33	28	0 44	1 3	14 52	320
17	Tu	23rd Sunday after Trinity—Venus rises at	7 23 R	18 59	6 40 R	11 24	●	1 24	1 43	14 40	321
18	W	Length of day, 8h. 46m.	4 8 S	19 13			1	1 59	2 19	14 26	322
19	Th	Wolsey died, 1530, aged 59	7 27 R	19 28	Afternoon. 5 37 S	Afternoon 0 16	2	2 37	2 55	14 12	323
20	F	Saturn sets at 10h. 43m. P.M.	4 6 S	19 41	6 35 S	1 12	3	3 15	3 33	13 57	324
21	S	Fleet Market opened, 1826	7 30 R	19 55	7 41 S	2 8	4	3 53	4 13	13 42	325
22	S	Princess Royal born, 1840	4 3 S	20 8	8 53 S	3 4	5	4 34	4 56	13 25	326
23	M	24th Sunday after Trinity—*St. Cecilia*	7 33 R	20 21	10 8 S	4 0	6	5 19	5 43	13 8	327
24	Tu	*St. Clement, Old Martinmas*—St. Clement is spoken of by St. Paul as one of his fellow-labourers. He is said to have been	4 0 S	20 33	11 25 S	4 54	☽	6 9	6 39	12 50	328
25	W	thrown into the sea with an anchor fixed about his neck	7 36 R	20 45	Morning. 0 41 S	5 47	8	7 6	7 41	12 31	329
26	Th	*St. Catherine*—Jupiter rises at 4h. 28m. P.M.	3 57 S	20 57	0 41 S	6 39	9	8 16	8 57	12 12	330
27	F	Dr. Watts died, 1748, aged 76	7 39 R	21 8	1 58 S	7 30	10	9 32	10 6	11 52	331
28	S	Hatfield House burnt, 1835 [5h. 8m. A.M.	3 55 S	21 19	3 15 S	8 22	11	10 44	11 19	11 31	332
29	S	Oliver Goldsmith born, 1731—Mars rises at	7 42 R	21 29	4 29 S	9 14	12	11 48		11 9	333
30	M	Advent Sunday—Mercury sets at 4h. 53m. P.M.	3 54 S	21 39							334
		St. Andrew—Venus rises at 7h. 23m. A.M.									

Times of changes of the Moon, and when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth, in each Lunation.

Full Moon	3d.	9h.	11m.	A.M.
Third Quarter	10th	11	44	P.M.
New Moon	18	11	0	,,
First Quarter	25	10	31	,,
Apogee	12	2		A.M.
Perigee	25	10		P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

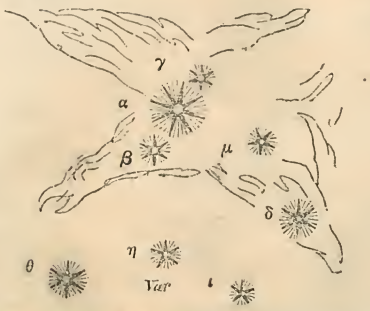
Days of the M.	Mercury. Right Ascension.	Mercury. Declination South.	Venus. Right Ascension.	Venus. Declination South.	Mars. Right Ascension.	Mars. Declination South.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′	h. m.	° ′
1	15h. 23m.	20° 10′	13h. 45m.	9° 28′	13h. 19m.	7° 34′	4h. 57m.	21° 53′	21h. 48m.	14° 58′	0h. 43m.	3° 48′
6	15 53	22 17	14 9	11 45	13 31	8 49	4 55	21 50	21 48	14 56	0 42	3 44
11	16 23	23 57	14 33	13 55	13 44	10 3	4 53	21 47	21 48	14 54	0 41	3 41
16	16 52	25 5	14 58	15 56	13 56	11 15	4 50	21 42	21 49	14 51	0 41	3 38
21	17 18	25 38	15 23	17 47	14 9	12 26	4 48	21 39	21 50	14 47	0 40	3 35
26	17 39	25 34	15 48	19 27	14 22	13 35	4 45	21 35	21 51	14 42	0 40	3 32

Note.—Wherever the symbols ° and ′ are used throughout this Almanack, they are to be considered respectively as degrees and minutes of angular distance; for the method of estimating which, *see October*.

NOVEMBER.

As the general phenomena during this month are very similar to those in the preceding and the following month, we shall proceed to explain the method of finding the principal stars visible in the evenings of the last months of the year.

The following is a representation of the positions of the stars in the constellation of Aquila, or the Eagle.



In the above drawing of the stars in the constellation Aquila, or the Eagle, a line from θ through β, α and γ, leads to α Lyræ a bright star a little S. of the Zenith; this line meets with two stars before it reaches α Lyræ, near to each other; the higher of the two is β Lyræ, the other is γ Lyræ; the former of these two stars is variable in brightness, being at times much brighter than at other times.

The amount of its variability is from having the brightness of a star of the 3rd magnitude, it changes to that of the 5th magnitude, and then increases its brightness till it is of the 3rd magnitude again; the time of its passing from one of these states to that of the other is about 6d. 9h.

A line from α Aquilæ through α Lyræ leads to two bright stars N. of the Zenith, and whose distance from each other is 4°; the most westerly one is β Draconis, the other is γ Draconis.

Near to the Zenith, but east of it, is the bright star α Cygni. A line from α Cygni through α Lyræ leads to the Northern Crown, being six stars placed in a semi-circle; the brightest is α Aurora Borealis.

A line from α Lyræ through the Northern Crown leads to the bright star Arcturus, a little North of West at the altitude of 19°.

A line from the Pole Star through β Draconis passes to two bright stars at the same elevation as α Aquilæ; the one to the W. is α Serpentis, the other is α Ophiuchi.

East of the Pole Star is Cassiopeia; a line from the Pole Star through Cassiopeia leads first to α Andromeda, and below it to γ Pegasi; these two stars form nearly a square with two other bright stars at the same elevation as themselves; and to the right of them, the higher of those two stars is β Pegasi, and the lower is α Pegasi.

Looking N.N. E, at the height of 13° is Capella; a little W. of it, but nearer the horizon, is β Aurigæ.

A line from β Aurigæ through Capella leads to γ Andromedæ, this line, a little bent downwards, leads to β Andromedæ, and continued onwards leads to α Andromedæ.

A line from Capella to γ Andromedæ passes nearly midway between two bright stars; the upper one is α Persei; the lower one is that very remarkable star β Persei (Algol); this star attains a maximum of brightness, and by degrees suffers a diminution of it. At its brightest it is as brilliant as a star of the 2nd magnitude, and after an interval of about 69 hours it appears to be of the 4th magnitude only; it then increases in brilliancy and becomes as bright as the 2nd magnitude again. We may here remark that there are some stars which attain their greatest brightness and then gradually decrease in brilliancy till they disappear altogether; but the periods of these are very long. In every respect β Persei is one of the most remarkable of those variable stars, and persons by comparing its brightness with the brightness of other stars near it during a few nights cannot fail to observe these changes.

A little N. of East at an elevation of 15° is α Arietis; closely following Aquila is a remarkable group of stars called Delphinus.

α Lyræ, with α Cygni and α Aquilæ form a remarkable triangle.

α Aquilæ through δ Aquilæ leads to the bright star Antares.

Immediately under the Northern Crown are seven remarkable stars in the constellation of Serpentis.

The principal constellations now visible are the following:—

Under the Pole Star is the Lynx.

Between the Pole Star and the Zenith is a part of Draconis.

The Zenith is occupied by a part of Cygnus (the Swan)

Between the Zenith and Aquila is the head of the Swan.

Below Aquila is Sagittarius, and to the East of it is Capricornus.

In the N.N. E. is Auriga (the Kid.)

In the N.E. is Perseus, and above Perseus is Cassiopeia, the stars of which form the letter W. Between Cassiopeia and the Zenith is Cepheus.

In the N.W. is the Great Bear, and between that and the Zenith is Draconis.

From the Pole Star through Cassiopeia leads to Andromeda, then to Aries and below that to Cetus.

West of the Meridian is Lyra near the Zenith. W. of Aquila are Hercules, Serpentis and Ophiuchus. The Northern Crown is about midway between the Zenith and the Horizon.

The stars will be in the positions here described, at 1h A.M., on the 1st day of July; at about 11h P.M, on the 1st day of August; at 9h P.M., on the first day of September; at a ¼ after 7 on the 1st day of October; at a ¼ after 5 on the first day of November. For a general reconnoitre of the heavens on any intervening day, subtract a portion of time from the time given for the first day of the month, equal to 4 minutes for every day after the first day of the month, so that if it be for the tenth day subtract 40 minutes.

In the month of March we traced the path of the Milky Way then visible; the other part of it can be traced in the latter months of the year as follows:—

It was mentioned that when it was at its extreme South position, it divided itself into two portions; starting from the Horizon, the eastern part passes the constellation Scorpio, the bow of Sagittarius through Aquila, and upwards to the Eastern part of Cygnus; the other passes a part of Scorpio, the right side of Ophiuchus through Cygnus, where the two divisions unite and from thence proceed to Cassiopeia. The whole of this vast space appears, when viewed through a telescope, to be covered with minute stars, which are scattered so thickly as to have the appearance of gold dust on a dark ground.

Between the 10th day and the 15th day of November, and particularly during the nights of the 12th and 13th, it is believed by many persons that there is a periodical return of meteors, exhibiting, as stated by some persons, a very extraordinary shower of shooting stars. By some persons it is believed that they wholly originate within the limits of our atmosphere; by others that they are heavenly bodies of inconsiderable dimensions. In order to decide as to which of these classes the meteors belong, it is manifest to that end the first step should be to discover at what distance from the Earth they take place.

In order to arrive at this, if two persons in different places should observe the same meteor, noting the time of its appearance and of its disappearance, or of the latter only, and indicating the star near which it came in sight and the star near which it was extinguished, the distance from the Earth can be calculated.

Persons who may observe the meteors on those nights, would do well to note their direction, their number in a given time, and, if possible, the time of the duration and the time of the extinction of each; and, in particularly remarkable ones, such as those which leave a train of sparks—those of different colours—to note the star near which they become extinguished.

ASTRONOMICAL OCCURRENCES IN NOVEMBER.

Planets.

Names	Time of passing the Meridian, or Southing, on the 15th. Day	When near the Moon	Angular Distance from the Moon North or South
	H. M.	D. H.	DEG.
Mercury	1 9 P.M.		
Venus	11 16 A.M.		
Mars	10 17 „	17 1 A.M.	⅓ North
Jupiter	1 4 „	5 9 P.M.	3 North
Saturn	6 11 P.M.	25 11 A.M.	6 South
Uranus	9 3 „		

Jupiter's Satellites.

Eclipses of

1st. Sat. Immersion	2nd. Sat. Immersion
D. H. M.	D. H. M
1 1 29 A.M.	4 9 6 P.M.
2 7 58 P.M.	11 11 43 „
8 3 23 A.M.	19 2 19 A.M.
9 9 51 P.M.	26 4 56 „
15 5 17 A.M.	29 6 14 P.M.
16 11 26 P.M.	
18 6 14 „	
24 1 40 A.M.	3rd. Sat.
25 8 9 P.M.	
	7 5 26 A.M.
	28 5 26 P.M.

Occultation of Stars by the Moon.

Names of the Stars	Times of disappearance and re-appearance	At the dark or bright limb of the Moon
	D. H. M.	
δ^1 Sagittarii	22 4 28 P.M.	Dark
	22 5 40 „	Bright
β^2 Capricorni	23 5 47 „	Dark
	23 6 29 „	Bright

November 23d, 3h, A.M., Mercury's greatest East elongation being 22 deg.—*(See September.)*

November 3rd, 10th, and 23rd days, Jupiter's Satellites all four East of the Planet, and W. of him on the 11th day at about 2 o'clock in the morning.

PROVIDING FOR THE WANTS OF MARTINMAS AND THE COMING WINTER, DISPOSING OF STOCK, OR VICTUALLING FOR HOME CONSUMPTION; AND WITNESSING THE BULL-RUNNING.

NOVEMBER, the ninth (*Novem*) month in the Alban Calendar, became the eleventh by the insertion of January and February at the beginning of the year. Its name and term of thirty days have remained unchanged, while the other months have been lengthened and curtailed at pleasure. Our ancestors called it *Blot Monath*, from the Saxon *blotan*, to slay; for, in this month they killed and salted the *beeves*, *bacons*, and *muttons*, that were to furnish forth the Winter's hospitable board.

All Saints' Festival (Nov. 1,) or, as it was originally called, Allhallow Even Mass, was instituted by Boniface IV., when he obtained permission from the Emperor Phocas, to convert the Pantheon at Rome into a Christian church: it was ordered to be kept in memory of the Virgin and All Martyrs, on the 12th or 13th of May; but, three centuries later, it was transferred to November 1, and All Saints substituted for All Martyrs; this day being set apart for their general commemoration, so that none who deserve to be commemorated by the Church should be omitted. Bells used formerly to be rung on this feast, and on the Vigil throughout the night, when also bonfires were lit: it is still kept as a Holiday at the Public Offices.

"The memories of the Saints, (says the pious Jeremy Taylor,) are precious to God, and, therefore, they ought also to be so to us; and such persons who serve God by holy living, industrious preaching, and religious dying, ought to have their names preserved in honour, and God be glorified in them, and their holy doctrines and lives published and imitated: and we by so doing give testimony to the article of the communion of saints. * * * The holiday is best kept by giving God thanks for the excellent persons, apostles, or martyrs, we then remember, and by imitating their lives: this all may do."

All Souls' Day, (Nov. 2,) is set apart by the Catholic Church for a solemn service for the repose of the dead: in this country, the day was formerly observed by ringing the passing bell, making soul cakes, blessing beans, and other customs. Various tenures, were held by services to be performed on this day.

The Landing of King William, (Nov. 4,) was formerly kept as a general Holiday, termed "Revolution Day." The centenary was celebrated with great pageantry in 1788, especially at Whittington, in Derbyshire, where the overthrow of James II. was plotted, in the "Revolution House."

Powder Plot, (Nov. 5,) is a parliamentary and general Holiday: it was appointed in 1605 as a day of thanksgiving, when all persons were required to go to church, "to give unto Almighty God thanks, and have in memory this joyful day of deliverance." In Spelman's time, the Judges went to church in state, on this day. Bishop Sanderson, in one of his sermons, says: "God grant that we nor ours ever live to see November the Fifth forgotten, or the solemnity of it silenced."

Lord Mayor's Day, (Nov. 9,) is still observed with a procession by land and water, the only state exhibition in the metropolis that remains of the splendid City pageants.

Shakspeare has left us this picture of its glories:—

Suppose that you have seen
The new appointed Mayor at Queenstairs
Embark his royalty; his own company
With silken streamers, the young gazers pleasing,
Painted with different fancies;—have beheld
Upon the golden galleries music playing,
And the horns echo, which do take the lead
Of other sounds: now view the city barge
Draws its huge bottom through the furrowed Thames,
Breasting the adverse surge. O do but think
You stand in Temple Gardens, and behold
London herself, on her proud stream afloat;
For so appears this fleet of magistracy,
Holding due course to Westminster.—*Henry V.*

Martinmas, (Nov. 11,) was formerly kept with great feasting; one of the delicacies being a fatted goose. In some Church expences on this day, we find entries of "bred and drynke for the syngers," "rose garlands, wyne, and ale." Victualling, or laying in of meat, and curing it for winter consumption, was the business of this day.

Queen Elizabeth's Accession, (Nov. 11,) was long observed as a Protestant Festival; and with the Society of the Temple; the Exchequer; Christ's Hospital, Westminster, and Merchant Tailors' Schools; it is still kept as a Holiday.

St. Cecilia, (Nov. 22,) is regarded as the patroness of Music, her skill having been, traditionally, so great, that an angel who visited her, was drawn from the mansions of the blessed by the charms of her melody; to which Dryden allludes in his celebrated Ode to Cecilia. Milton has, also, some lines on this day, in his *Il Penserosa*. Concerts were common on St. Cecilia's Day, in the times of Dryden and of Pope.

St. Andrew, (Nov. 30,) is the tutelar Saint of Scotland: he suffered martyrdom on a cross in the form of an X; which is introduced as part of the insignia of the Scottish order of the Thistle. St. Andrew stands first among the Saints in the Prayer Book arrangement, because he first found the Messiah (John i. 18). Advent Sunday is, therefore, the Sunday nearest this Feast. St. Andrew's Feast is kept as a Holiday at the Bank, Customs, and Excise.

November was said by the ancients to be under the tutelage of Diana; from hunting and field-sports being general in this month. The cheerful and lively music of several packs of Harriers and of Beagles, in full cry, are now often heard, reminding us of

Thy hounds shall make the welkin answer them,
And fetch shrill echoes from the hollow earth.—Shakspeare,

Our artist has depicted the old barbarism of Bull-running, formerly practised in certain places, on the day six weeks before Christmas; as at Stamford and Tutbury. The hivie-skivie, and tag-and-rag of the scene are thus described in a ballad of the early part of the last century:—

Before we came to it, we heard a strange shouting,
And all that were in it looked madly;
For some were a Bull-back, some dancing a Morrice,
And some singing Arthur O'Bradley!

I. T.

NOVEMBER.

Birds are generally mute during the month, except the robin, the wren, and the thrush, which frequently break out into song as in the summer. The goldfinch, also, may sometimes be heard, and as cheerily in the midst of fog as in the brightest sunshine.

The following birds assemble in numerous flocks—greenfinches, house-sparrows, skylarks, fieldfares, redwings, starlings, chaffinches, and the long-tailed titmouse.

During the month, the following birds may be expected to arrive from the North, or from the mountainous parts of the country. The stock-dove, the golden-plover, the widgeon, the Bohemian wax-wing, and the golden eye-duck.

The Stock-dove, or wild-pigeon, is in length fourteen inches, the bill red, and curved at the point; the head, neck, and upper part of the back, are of a blue-grey; the rump and belly grey, feet dull-red, and the claws black.

The Golden-plover is of the size of the turtle. Bill dusky, eyes black; all the upper parts of the plumage are marked with bright-yellow spots upon a dark-brown ground; the fore part of the neck and the breast are the same, but much paler; the belly is almost white; the quills are dusky; the tail is marked with dusky and yellow bars; the legs are black—*(See Bewick's British Birds)*

The Widgeon quits the desert morasses of the north on the approach of winter; in its general shape it much resembles the duck; its length is about twenty-three inches, and weighs about twenty-three ounces. The bill is narrow, about an inch and a half in length, of a blueish-lead colour, tipped with black. The crown of the head is of a cream colour; the rest of the head, the neck, and the breast, are chesnut; the belly to the vent is white, the ridge of the wing is ash-brown.

The Bohemian Wax-wing. This is a very beautiful bird; it is about eight or nine inches in length, and about three ounces in weight. The bill is black at the tip, the chin and throat are deep velvet-black. The feathers on the crown are long and silky. These birds sometimes appear in numerous flocks; and sometimes they are not seen for many years together. In 1810, they were numerous, and none were seen for ten or twelve years afterwards.

The Golden-eye Duck is named from the colour of the iris of the eye, which is very brilliant, of a bright-yellow colour, and shines like a spot of gold on the side of the head.

THE COMMON SNIPE.

The Common Snipe is very numerous during this month; it is about nine inches in length, exclusive of the length of the bill, which is three inches. Its breadth, in the stretch of its wings, is about fifteen inches. The weight, when full grown, is about a quarter of a pound. The bill is flattened, and of a dull-reddish colour at the base, yellowish in the middle; rough and brownish at the tip; it is generally very smooth in the living bird; but from its soft consisteney, in consequence of containing more living substance than a hard bill, becomes shrivelled and loses its colour after death. The top of the head is of a russet colour, marked with three streaks of pale brown, that one, which is the best defined, passes over the middle of the head, and the others form a semi-circular band over each eye; from the gape over the eye, and down the side of the neck, runs a dark brown streak; from the corners of the mouth a dark brown mark extends nearly to the eye, and continued after it passes the eye; the chin, throat, and fore part of the neck, are of a very pale brown with irregular markings of a darker colour; and the rest of the under parts are white. The back is black, with reflections of green and brown. The feathers on the shoulders are elegantly striped lengthwise, and barred across with black and yellow; the wings are of a dusky brown; the quills are tipped with white; the tail is composed of fourteen feathers; the legs are slender, varying in colour in different subjects, some being of a light green, and others of a dark-slate colour; the toes are long, and delicately slender; the colour of the eyes is hazel, and are placed so far backwards in the head as to command the whole horizon without turning. And it is in this that their safety lies, they being without any weapon of defence.

The bill is a very curious instrument, and seems to be possessed of a very keen sense of smell. They bore into the soft sludgy ground for some distance for their food, and as they bore directly down upon it, they must scent it from the surface. The head extends over the bill in all directions, and, therefore, its weight is always ready to assist the bill, in its laternal twistings, as it is bored into the sludge. Its food consists principally of small worms, and it is said also to eat slugs, which breed abundantly in its usual haunts.

The haunts of the snipe are in marshy places, and usually where there is an abundance of tall aquatic herbage to conceal themselves and their nests. In these places, when undisturbed, it is continually pacing the ground, with its head erect. And at short intervals it moves its tail from side to side. It is a shy bird, and extremely watchful; therefore, is difficult to approach. On perceiving the sportsman and his dog, which it does at a great distance, it immediately conceals itself among the variegated withered herbage, so similar in appearance to its own plumage, that it is almost impossible to discover it while squatting motionless in its seat.

When alarmed, the snipe utters a shrill whistle, and rises with considerable noise; it flies with great swiftness, and after having been roused two or three times, it is difficult to get within shot.

The snipe is migratory, and is met with in all countries. They leave Great Britain in the Spring, and return in the Autumn; it has been well ascertained that many remain and breed in various parts of the country, but their disappearance from the low grounds is complete during the Summer. The love cry of the male begins in March or April, according to the season, and he continues to call till a partner answers. The female makes her nest in retired and inaccessible parts of the morass, and it is rudely constructed of withered grasses and a few feathers. The eggs are four or five in number, of a greenish colour, with brown spots. The young, as is the habit with most ground birds, come out of the shell covered with down, and with their feet so well developed, that they very speedily are able to find their own food, the parent birds, however, attending them till their bills have acquired sufficient firmness to be able to assist themselves readily.

Insects are scarce; many flies, before this time, have become blind and have died; some, however, still continue, and a few will be seen even to Christmas.

The common blow-fly, or musca carnaria, is hairy, black, with its abdomen shining. As every one knows, it deposits its eggs on animal flesh, either fresh or putrid. The eggs are hatched in a few hours, and the maggots, when full grown, which is in eight or ten days, are of a yellowish-white colour, with a slight tinge of pale-red. This maggot is of a lengthened shape, with a pointed front, in which the mouth is situated, and from this the body gradually increases to the other end, which is broad and flat, and on which are two specks resembling eyes, so that a person might take this for its head, and the head for the tail. The insect afterwards changes to a chrysalis, the skin dries round it, and the whole becomes of an oval form. In ten days more, the fly emerges, which is too well known to need further description.

These insects are of great service in the economy of nature, their province being the consumption of decaying animal matter. It was asserted by Linnæus, that three of these flies would consume a dead horse as quickly as a lion. This was, of course, with reference to the offspring of such three flies; and as a single female, in the course of a few days, lays 20,000 eggs, the maggots of which, being so exceedingly voracious, that in the course of the first twenty-four hours, they increase in weight more than two hundred times; it is very possible the assertion is correct.

Musca meteorica; this fly is very troublesome to horses in summer; it is black; abdomen a pale grey; wings yellowish at the base; they have an aversion to elder—a branch of which, placed on the head of the horse, frequently saves both horse and rider much annoyance. They come in swarms before rain, like the species pluvialis, so called from the circumstance of vast swarms appearing before rain; this last mentioned species has five black spots on its back; and its abdomen has obsolete spots on it.

The domestic fly is an exceedingly abundant species; its face is black, with buff sides; forehead yellowish, with a black band; antennæ black; the back with five pale lines; the abdomen has black markings; legs black; wings clear, with the base yellowish. This fly, as is well known, is capable of walking upon the ceilings of rooms, with its back downwards, or upon highly polished glass; in which situation its body is not supported by its legs. From the experiments of Sir Everard Home, it appeared that this was effected by the formation of a vacuum, by means of the close application of the edge of the feet, and the subsequent muscular raising of the central parts, so that the pressure of the atmosphere acted upon the outer sides of the feet, and not upon the inner.—*(See Philosophical Transactions, for* 1816, *pages* 149 *and* 322.)

Mr. Blackwall has published a paper in the *Linnæan Transactions*, based upon a careful set of experiments, and he considers that an adhesive secretion is emitted, by means of which, they adhere to whatever place they may alight.

The hawthorn, though stripped of its leaves, is yet attractive, from the circumstance of being covered with berries; in our gardens the Virginian creeper, and various kinds of chrysanthemums are in flower. We are indebted to China for these autumnal gifts, which so considerably shorten the winter of our gardens; formerly at this time the floral season was ended:—

> All green was vanished, save of pine and yew,
> That still displayed their melancholy hue;
> Save the green holly, with its berries red,
> And the green moss, that o'er the gravel spread.

DECEMBER, 1846.

M D	W D	ANNIVERSARIES, OCCURRENCES, AND FESTIVALS.	Sun. Rises—R. Sets—S. H. M.	Sun. Declination South ° ′	Moon. Rises—R. Sets—S. H. M.	Moon. Souths. H. M.	Moon. Age D.	High Water at London Bridge. Morning. H. M	High Water at London Bridge. Afternoon H. M	Equation of Time. Subtract. M. S.	Day of the Year
1	Tu	Mars rises at 5h. 8m. A.M.	7 46 R	21 49		11 0	13	0 17	0 42	10 47	335
2	W	Napoleon crowned, 1804—St. Paul's finished, 1710	3 52 S	21 58	Morning. 6 51 S	11 54	○	1 10	1 34	10 24	336
3	Th	Belzoni died 1823	7 48 R	22 7			15	1 56	2 17	10 1	337
4	F	Saturn sets at 9h. 47m. near W.S.W.	3 51 S	22 15	Afternoon. 5 47 R	Morning 0 48	16	2 38	2 59	9 37	338
5	S	Mozart died, 1792—Battle of Austerlitz, 1805	7 51 R	22 23	6 45 R	1 40	17	3 20	3 39	9 12	339
6	S	2nd Sunday in Advent—*St. Nicholas*—St.	3 51 S	22 30	7 46 R	2 30	18	3 58	4 16	8 47	340
7	M	Nicholas was Archbishop of Myra, in Greece, A D 302. He is regarded as the patron saint of children and mariners, probably in consequence of his benevolent zeal in the protection of orphans and stranded seamen. Churches	7 53 R	22 37	8 49 R	3 17	19	4 35	4 53	8 21	341
8	Tu	built near the sea are, in many instances, dedicated to St. Nicholas	3 50 S	22 44	9 51 R	4 2	20	5 11	5 52	7 55	342
9	W	Colley Cibber died, 1732	7 56 R	22 50	10 54 R	4 46	21	5 50	6 10	7 29	343
10	Th	Grouse shooting ends—Charles XII. killed 1718	3 49 S	22 55	11 57 R	5 29	☾	6 33	6 54	7 1	344
11	F	Awful slaughter of British troops in Affghan, 17,000	7 58 R	23 1	Morning.	6 11	23	7 17	7 45	6 34	345
12	S	*Old St. Andrew's Day* [lives lost, 1842	3 49 S	23 5	1 0 R	6 54	24	8 17	8 52	6 6	346
13	S	3rd Sunday in Advent—*St. Lucia*	8 0 R	23 10	2 4 R	7 38	25	9 24	9 58	5 38	347
14	M	Izaak Walton died, 1683, aged 90	3 49 S	23 14	3 10 R	8 24	26	10 30	11 2	5 9	348
15	Tu	Lord Stanhope died, 1816, aged 63	8 1 R	23 17	4 17 R	9 12	27	11 34		4 40	349
16	W	Camb. Term ends—Mars rises at 5h. 6m. A.M.	3 49 S	23 20	5 25 R	10 4	28	0 3	0 27	4 11	350
17	Th	Oxford Term ends—Jupiter sets at 6h. 49m. A.M.	8 3 R	23 22	6 30 R	10 59	29	0 46	1 10	3 41	351
18	F	Bolivar died, 1830—Saturn sets at 8h. 58m. A.M.	3 50 S	23 24	7 32 R	11 56	●	1 33	1 55	3 11	352
19	S	Uranus, or Herschel, sets at 1h. 9m. after mid-	8 5 R	23 26	Afternoon.	Afternoon	1	2 16	2 38	2 42	353
20	S	4th Sunday in Advent [night	3 51 S	23 27	6 37 S	1 52	2	3 0	3 22	2 12	354
21	M	*St. Thomas*, shortest day.—A festival of the Eng-	8 6 R	23 27	7 54 S	2 48	3	3 43	4 6	1 42	355
22	Tu	lish Church It was customary in England to go *a-gooding* on St. Thomas's Day; that is, they went about begging money, and presenting in return	3 51 S	23 27	9 12 S	3 43	4	4 27	4 51	1 12	356
23	W	sprigs of palm and bunches of primroses, probably with a view to the decoration of their houses against Christmas	8 6 R	23 27	10 30 S	4 36	5	5 12	5 37	0 42	357
24	Th	Christmas Eve—Length of Day, 7h. 46m.	3 52 S	23 26	11 48 S	5 28	6	6 2	6 27	Add.	358
25	F	Christmas Day	8 7 R	23 25	Morning.	6 19	☽	6 53	7 22	0 18	359
26	S	*St. Stephen*—Saturn sets at 8h. 31m. P.M.	3 53 S	23 23	1 2 S	7 10	8	7 51	8 23	0 48	360
27	S	1st Sunday after Christmas—*St. John the*	8 8 R	23 21	2 17 S	8 1	9	9 0	9 35	1 18	361
28	M	*Innocents*—Mars rises at 5h. 5m. A.M. [*Evangelist*	3 55 S	23 18	3 28 S	8 54	10	10 10	10 50	1 47	362
29	Tu	Jupiter sets at 6h. 6m. A.M.	8 9 R	23 15	4 37 S	9 46	11	11 25	11 57	2 17	363
30	W	Venus sets at 4h. 11m. P.M.	3 57 S	23 11	5 39 S	10 39	12		0 27	2 46	364
31	Th	*Silvester*—Mercury rises at 6h. 16m. A.M.	8 9 R	23 7	6 34 S	11 31	13	0 53	1 18	3 15	365

Times of changes of the Moon, and when she is at her greatest distance (Apogee,) or at her least distance (Perigee,) from the Earth, in each Lunation.

				Days of the M.
Full Moon	2d.	10h.	46m. P.M.	1
Third Quarter	10th	9	16 „	6
New Moon	18	0	42 „	11
First Quarter	25	6	36 A.M.	16
Apogee	9	11	P.M.	21
Perigee	21st	4	„	26

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

	Mercury. Right Ascension.	Mercury. Declination South.	Venus. Right Ascension.	Venus. Declination South.	Mars. Right Ascension.	Mars. Declination South.	Jupiter. Right Ascension.	Jupiter. Declination North.	Saturn. Right Ascension.	Saturn. Declination South.	Uranus. Right Ascension.	Uranus. Declination North.
	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′	H. M.	° ′
1	17h. 50m.	24° 51′	16h. 14m.	20° 52′	14h. 35m.	14° 41′	4h. 42m.	21° 29′	21h. 52m.	14° 36′	0h. 40m.	3° 31′
6	17 42	23 27	16 41	22 3	14 48	15 44	4 39	21 25	21 53	14 30	0 39	3 30
11	17 18	21 31	17 8	22 57	15 2	16 45	4 36	21 19	21 54	14 22	0 39	3 29
16	16 52	19 47	17 35	23 34	15 16	17 43	4 33	21 15	21 55	14 15	0 39	3 28
21	16 41	19 13	18 3	23 53	15 29	18 38	4 31	21 10	21 57	14 6	0 39	3 28
26	16 47	19 47	18 30	23 53	15 43	19 28	4 28	21 6	21 59	13 57	0 39	3 29

DECEMBER.

During the month of December, Jupiter is very favourably situated for observation *(see remarks on him in January and February)*. During the first few days he will be readily found by considering a line drawn from β Aurigæ to Aldebaran, and at the distance of 6° from the latter star he will be shining brilliantly; he also may be found by considering a line drawn from ξ Orionis through γ Orionis *(see the month of March)* which passes a little to the W. of Jupiter; as the month advances he approaches nearer to Aldebaran, and on the 27th day the Planet will be directly over Aldebaran at the distance of 5 degrees.

The Planet Saturn will be visible during the early part of the evening, and he may be found in the same manner as explained in October. There is no other Planet visible, during the month, to the naked eye. Uranus is favourably situated at about 7 P.M., to those persons who have telescopes.

The month of December is distinguished this year by the great number of stars occulted by the Moon. On the 29th there will be two stars in Taurus, which will disappear at the dark limb of the Moon, and will reappear at the bright limb, and one other star will just graze the Moon. And on the 31st day there will be two other stars, which will disappear and reappear. To facilitate these observations, and to enable persons to know at what points of the Moon to look for these several disappearances and reappearences, we give the following engraving. The letter V on the top of the Moon refers to the highest point of the Moon, at the times of the phenonoma. The Moon at the time is about 11 or 12 days old.

The disappearances are all at the dark side of the Moon, and of course at some distance from the illuminated portion; that of δ^1 Tauri will disappear at that part of the Moon marked 1 at 6h. 55m., in the evening, and it will reappear at the bright limb at 7h. 44m., at that part marked 2; at 7. 57 the Star δ^2 Tauri will just touch the Moon at the part marked 3, or it will graze along the Moon's border. At 8h. 19m., the Star δ^3 Tauri will disappear at the place marked 4, and it will reappear at the place marked 5, at 9h., 33m. These occurrences will all take place on the 29th day; and the stars are of the 4th magnitude. On the 31st day at 2h. 29m., in the morning the Star 119 Tauri will disappear behind the Moon at the part marked 6, and at the part marked 7 another Star 120 Tauri will disappear at 3h. 28A.M; these two stars will reappear respectively at the bright limb, at the parts marked 8 and 9, at 3h. 49A.M., and at 4h. 26A.M.

To observe these phenonoma it is necessary to use a telescope, as very many of the Astronomical Appearances and Occurrences treated of during this year, to see them properly, require a telescope; and, as many persons who are not much accustomed to the use of telescopes may not adjust them properly for use, we will conclude this part of our treatise by a few words upon their adjustments.

It must be borne in mind that the adjustment of a telescope requires altering with every change of eye, and with every variation of the distance of the object viewed.

Opticians generally draw a line round the tube, at that place where, if the eye-tube be placed, objects at a certain distance viewed through the telescope by an ordinary eye, will be most distinct; but this arrangement needs altering for any other eye, and for the same eye at different distances. Therefore, every person should adjust the telescope for his own eye; this may be done as follows:—hold the telescope by one hand, the eye-tube by the other, whilst looking at any object, and withdraw the eye-tube gently, then the object viewed will either gradually increase in clearness or it will gradually become indistinct; if the former, continue withdrawing, till the eye-glass approaches its proper distance from the object-glass, and when it is at its proper distance, the object will be seen perfectly distinct and well defined; if the eye-tube be drawn further out, the object will again become indistinct, and in that case it must be pressed in again. Practice, to do this readily, is necessary, but a very little will enable a person to obtain that position at which the most perfect distinctness can be obtained.

The greater the magnifying power of a telescope, the greater necessity for an accurate adjustment of it.

If you should wish to view a terrestrial object at a greater distance or at a less distance than another, for each variation a corresponding change must be made in the distance between the eye-glass and the object-glass. Suppose at a greater distance, then the two glasses must be brought a little nearer together by pressing in the eye-tube; if at a less distance, by withdrawing the eye-tube.

If a person usually wear spectacles, such persons should look through the telescope with their spectacles on, if the adjustments have been made by another person with an ordinary eye: if they remove their spectacles they must adjust the telescope for themselves.

All good telescopes are most distinct in the centre of the field of view; it is therefore desirable to keep an object exactly in the middle of the field. A telescope once adjusted for celestial objects needs no change of adjustment for any of them.

We have now merely to remark, that in the Astronomical occurrences of each month, we have given the times at which the Planets pass the Meridian, and if the Sun be below the horizon at such times, they are the best times for looking at them, and if the Sun be not below the horizon, the best times are the nearest to those times when he is beneath the horizon. It will be recollected that for a few hours before the times the Planets pass the Meridian they are always East of the Meridian, and they are W. afterwards. The times are given when the Moon passes the nearest to the Planets in her monthly course, with the angular distance they are from the Moon at such times. If the directions for estimating angular distances given in the month of October be understood, the spot occupied by the Planet will be known at once. The Eclipses of Jupiter's Satellites were explained in January and February. The occultations will be understood by what has preceded, and the other occurrences generally explain themselves.

We trust, therefore, that with this information, and the accurate representation we have endeavoured to give of each class of Astronomical Appearances this year, with the above remarks on the adjustment of telescopes, will enable some of our readers who have telescopes, to observe those appearances to advantage. Those appearances it is almost impossible to describe by words; but, being correctly represented, they will be readily understood; and it must be borne in mind that, to see an Astronomical phenomenon well, it is imperatively necessary to know the nature of the phenomenon; the exact place to look at, and what to look for; it is these desiderata we have endeavoured to supply.

To those who have not telescopes, we have given the best substitute for them by describing and accurately representing the several phenomena.

All the drawings of phenomena are as they would appear to the naked eye, or as they would appear through a telescope that does not invert; but, if the book be turned upside down, and the leaf turned over and viewed from that side, they will appear as through a telescope that does invert.

ASTRONOMICAL OCCURRENCES IN DECEMBER.

Planets.

Names	Time of passing the Meridian or Southing, on the 15th. day	When near the Moon	Angular Distance from the Moon North or South
	H. M.	D. H.	DEG.
Mercury . . .	11 22 A.M.	17 1 P.M.	1 South
Venus . . .	11 55 „	18 2 P.M.	5 South
Mars . . .	9 38 „	15 10 P.M.	2 South
Jupiter . . .	10 57 P.M.	3 At Midnight	3 North
Saturn . . .	4 19 „	22 8 P.M.	6 South
Uranus . . .	7 3 „	25 8 „	2 South

Jupiter's Satellites.

Eclipses of

1st. Sat. Emersion	2nd. Sat. Emersion	3rd. Sat.
D. H. M.	D. H. M.	D. H. M.
10 2 7 A.M.	6 11 27 P.M.	5 11 46 P.M.
11 8 35 P.M.	14 2 3 A.M.	13 3 47 A.M.
17 4 2 A.M.	21 4 40 „	
18 10 3 P.M.	24 5 58 P.M.	
20 4 59 „	31 8 35 „	
26 0 25 A.M.		
27 6 54 P.M.		

Occultation of Stars by the Moon.

Names of the Stars	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
	D. H. M.	
119 Tauri	3 5 17 P.M.	Bright
	3 5 47 „	Dark
120 Tauri	3 5 41 „	Bright
	3 6 27 „	Dark
μ Geminorum	5 0 55 A.M.	Bright
	5 2 12 „	Dark
κ Cancri	7 9 46 P.M.	Bright
	7 10 32 „	Dark
21 Piscium	24 6 35 „	Bright
	24 7 32 „	Dark
For 119 and 120 Tauri &c., see above	30 0 0 „	Bright

December 2d, 7h, A.M., Mercury stationary with respect to the fixed Stars.—*(See September.)*
December 2nd, at about midnight, all four of Jupiter's Satellites W. and on the 6th day all four E. of the Planet.
December 11th, 6h, A.M., Mercury at the least distance from the Sun.
December 11th, at Midnight, Mercury in inferior conjunction with the Sun.—*(See September.)*
December 16th, 1h, A.M., Venus in superior conjunction with the Sun.—*(See May.)*
December 22nd, 4h. 12m., the Sun enters Capricornus, and Winter commences.

THE FINE OLD ENGLISH GENTLEMAN WELCOMING AT HIS GATE A BAND OF MUMMERS, TO SHARE WITH HIM, AND ENLIVEN, THE FESTIVITIES OF CHRISTMAS.

December, the tenth (from *Decem*), and last month of the Alban and early Roman Calendars, is also the last month of the modern year. In this month, the Romans celebrated their *Saturnalia*, when slaves were on an equal footing with their masters. The Saxons, before their conversion to Christianity, called December *Winter-Monath*; but, after that, added to it the appellation of *Haligh*, or Haly, in commemoration of the Nativity, which has always been celebrated in this month; although the true time of our Saviour's birth is placed in August.

St. Nicholas's (Dec. 6) legends relate such marvellous instances of his early conformity to the observances of the Roman Church, as entitled him to the appellation of the Boy Bishop. The choice of his representative in every cathedral church in this country continued till the reign of Henry VIII.; and, in many, large provision of money and goods was made for the annual observance of the festival of the Boy Bishop, which lasted from this day until *Innocents' Day* (Dec. 28), during which the utmost misrule and mockery of the most solemn rites were practised and enjoined. Of these customs, the *Montem* at Eton is a corruption: it is celebrated triennially; the last Montem was in June, 1844.

Christmas Eve (Dec. 24) is celebrated because, Christmas Day, in the primitive Church, was always observed as the Sabbath Day, and, like it, preceded by an Eve, or Vigil. Superstition, ever sweet to the soul, was doubly prompted by the sancity of the season. It was once believed that at midnight, all the cattle in the cow-house would be found kneeling; that bees sang in their hives on Christmas Eve, to welcome the approaching day; and that cocks crowed all night with same object: to the latter, Shakspeare alludes in *Hamlet*:—

> Some say that even 'gainst that hallow'd season
> At which Our Saviour's birth is celebrated,
> The Bird of Dawning croweth all night long.

The ceremonies and amusements of this season are too numerous for us to describe. The Waits, or more properly Wakes, usually commence their nocturnal serenades about the middle of the month, and play nightly, till Christmas Day. Although the music now played is secular, the custom originated evidently in commemoration of the early salutation of the Virgin Mary before the birth of Jesus Christ, or the *Gloria in Excelsis* the hymn of the angels—the earliest Christmas Carol: the word Carol is from the Italian *Carola*, a song of devotion, (*Ash*); or from *cantare*, to sing, and *rola*, an interjection of joy, (*Bourne.*)

Carols are yet sung at Christmas in Ireland and Wales; but, in Scotland, where no Church fasts have been kept since the days of John Knox, the custom is unknown. On the Continent it is almost universal: during the last days of Advent, Calabrian minstrels enter Rome, and are to be seen in every street, saluting the shrines of the Virgin-mother with their wild music. Within the present century, the singing of Carols began on Christmas Eve, and were continued late into the night. On Christmas Day, these Carols took the place of Psalms in all the churches, the whole congregation joining; and at the end the clerk declared in a loud voice, his wishes for a merry Christmas and a happy new year to all the parishioners. Still these Carols differed materially from those of earlier times, which were festal chansons for enlivening the merriment of Christmas, and not songs of Scripture history; the change having been made by the Puritans.

The decking of churches and houses with laurel and other evergreens, at this period, may be to commemorate the victory gained over the powers of darkness by the coming of Christ. The gathering of Mistletoe is a relic of Druidic worship; and Holly was originally called the *holy* tree, from its being used in holy places.

Christmas Day has been set apart, from time immemorial, for the commemoration of our Blessed Saviour's birth; when, "though Christ was humbled to a manger, the contempt of the place was took off by the glory of the attendance and ministration of angels." Christmas is named from *Christi Missa*, the mass of Christ; it was, however, forbidden to be kept as a fast by the Council of Braga, A.D. 563; which anathematised such as did not duly honour the birthday of Christ, according to the flesh, but pretended to honour it by fasting on that day; a custom attributed to the same conception which led to the practice of fasting on the Lord's day namely, the belief that Christ was not truly born in the nature of man. Since this Canon, we do not find any positive regulation specially affecting the observance of Christmas.—(*Feasts and Fasts.*)

To detail the hospitalities of Christmas would fill a volume, though our artist has grouped the most characteristic celebrities of the season. Here is "The Fine Old English Gentleman" welcoming to his gate a band of Mummers, (masked persons,) and Minstrels, with their ludicrous frolics, not forgetting the Hobby-horse Dance:—

> We are come over the Mire and Moss: | A Dragon you shall see,
> We dance an Hobby-horse; | And a wild worm for to flee.

The Loving-cup was borrowed frem the Wassail-bowl, though the latter was carried about with an image of Our Saviour. Here, too, is the *bore's head*, "the rarest dish in all the lande, and provided in honour of the King of bliss." Nor must we omit the Yule-log burnt on Christmas Eve; though the bringing it in with "Christmas Candles" is forgotten. Even the mince-pies are assumed to be emblematical—their long shape imitating the cratch, rack, or manger wherein Christ was laid—(*Selden*). Christmas boxes are of Pagan origin.

Although much of this custom of profuse hospitality has passed away, Christmas is yet universally recognised as a season when every Christian should show his gratitude to the Almighty, for the inestimable benefits procured to us by the Nativity of our Blessed Saviour, by an ample display of good will toward our fellow men. "Hospitality is threefold: for one's family; this is of necessitie: for strangers; this is of courtesie: for the poore; this is charity."—(*Fuller.*)

St. Stephen's Day, (December 26,) is first in the days of Martyrdom: St Stephen being a Martyr both in *will* and *deed*. *St. John* (December 27,) being a Martyr in *will*, but not in *deed*, is placed second.

The Innocents, (December 28,) being Martyrs in *deed*, though not in *will*, are, therefore, placed last.—(*Elementa Liturgica.*)

I. T.

DECEMBER.

Birds are generally mute during this month; the robin and the wren, however, sing in all weathers.

Woodcocks are the most abundant during this month. They do not arrive in large flocks, but keep arriving on our shores singly, or sometimes in pairs, from the beginning of October till December. The woodcock is about fifteen inches in length, twenty-seven in breadth, and weighs from twelve to sixteen ounces; bill three inches long, and is formed in much the same manner as in the snipe; the forehead is ash coloured, and all the rest of the upper part is barred with black and grey; the under parts are yellowish, with dusky streaks lengthwise; eyes

THE WOODCOCK.

large, situated near the top of the head; legs short; tail formed of twelve feathers, the two centre ones rather the longest. The colours, consisting of black, white, ash, red, brown, rufous, and yellow, are so arranged in rows, crossed and broken at intervals by lines and marks of different shapes, that the whole seems to the eye, at a little distance, blended together, giving to the bird exactly the same appearance as the withered sticks, leaves, &c., which form the background of the scenery of its usual haunts.

The chrysalides of the cabbage, the swallow-tailed and the peacock butterflies may be found under sheltered projections; also those of most butterflies and moths in their accustomed situations. Insects, with the exception of a few moths, have disappeared

The vegetable kingdom is now in a state of repose, with the exception of the evergreens, and here and there a daisy, or a polyanthus. All appears leafless, and, in the words of Thomson—

Dread Winter spreads his latest glooms,
And reigns tremendous, o'er the conquered year,
How dead the vegetable kingdom lies!

SPRIG OF HOLLY IN FLOWER, AS IT APPEARED IN MAY.

Though thus dead, yet there is much for a naturalist to observe. The rich appearance of trees and shrubs, by the crystallization of hoar frost, is frequently very beautiful; and, if examined, the crystal will be found different in form on every different shrub and substance.

The chrystalized forms of snow, too, is well worthy examination. There are more than fifty different forms known, some of which are exceedingly beautiful.

The effects of snow are well worthy investigation. From experiments made by Mr. Glaisher, and published in the Illustrated London News of 1845, February 15th, it appeared that during the night common to the 11th and 12th of February, the effect of snow on grass caused the latter to be 32° warmer than grass not covered by snow. With a hope of being allowed to meet our friends another year, we close this division of the Almanack with the symbol of of the season; but, first, we will illustrate one of the changes alluded to below, by giving its appearance as it was in May, and its appearance as at present.

BRANCH OF HOLLY WITH BERRIES AS IT APPEARS IN DECEMBER.

Upon concluding this part of our Almanack, a few remarks may be excusable. The vast fields that Astronomy and Natural History embrace, would of course preclude us from noticing other than small portions of these sciences. In the former, however, we have taken especial care that no important or interesting phenomena is omitted that will happen during the year, except, indeed, it be a new comet, of which, at present, we have no information. In the Natural History, we have noticed, in each month, the most interesting occurrences in that month; and, in detail, as far as is necessary for the general reader, and the recognition of the subject spoken of. In some cases we have entered into more particular details, where such would tend to remove either popular error or prejudice—such as in the case of the bittern, the blue titmouse, &c. And in some cases we have endeavoured to enlist a better feeling towards the despised of creation—as in the case of snails, &c. All animals are preyers, whatever be their kind of food; but, in the economy of nature, preying is preservation, not destruction, and tends quite as much to preserve the races preyed upon as those which are the preyers. Life, both in the vegetable and animal kingdom, is too abundant for the means of life. The former is almost unlimited; the latter is bounded by the quantity of matter that can exist in a particular form; and it is only the excess of life above the means of supporting it that is preyed upon. And it must be borne in mind that were no more of each kind produced, than were necessary for the continuation of that kind, all means of nourishment would be at an end.

Of this superabundance of vegetable life, snails, caterpillars, &c., from their vast abundance, and their being most numerous where there is the most food, are evidently destined to perform an important part in the economy of wild nature. These, in their turn, are eaten by birds, the eggs of which are preyed upon by other birds, and these last again by rapacious birds; again, it is eaten by animals, as grass by many; the grass-eater in his turn becoming food for others. And thus the wholesome balance is kept, which is the best for all. And, if in any case one class becomes too numerous, the balance is still obtained by pestilence carrying off the superabundance. Thus we see, that in the animal and vegetable kingdom, the series goes on till mildew on trees, or, in other words, fungi (as in cases of the species Hydnum, (*see July*) feed upon the ruins of the largest trees, and in general upon anything of a vegetable nature, in a state of decay. The mould on cheese, and that on bread, are both a species of fungi. In the animal kingdom the caterpillar feeds on the carcase of the largest beasts.

Nature abounds everywhere. Our life, our means of living, depend upon a partial knowledge of it. And when we consider the variety of subjects, so varied—so beautiful—so well adapted for the fulfilment of their respective parts—can we doubt that a system so extensive, yet all connected, changeful, yet so constant; parts always decaying, and always renewing; ever changing, yet always the same—that all can be without a Maker more Mighty than it all. Again, look at our Astronomical article—how many occurrences are there predicted, yet every one will happen at the time predicted. But that part of which we have spoken, is only a small portion of the universe, which is beyond all conceivable bounds. The Maker of this majestic structure must be one, compared with whom all human thought, all human power, is as nothing.

The Heavens declare the glory of GOD, and the Firmament showeth His handiwork.

STAMPS AND TAXES.

RECEIPT STAMPS.

	s.	d.		s.	d.
For £5 and under £10 ..	0	3	For £200 and under £300 ..	4	0
10 .. 20 ..	0	6	300 .. 500 ..	5	0
20 .. 50 ..	1	0	500 .. 1000 ..	7	6
50 .. 100 ..	1	6	1000 and upwards ..	10	0
100 .. 200 ..	2	6	In full of all demands	10	0

N.B.—Persons receiving the money are compelled to pay the duty.

BILLS AND NOTES.

	Not ex. 2 months. s.	d.	Exceed. 2 months. s.	d.
£2 and under £5 5s.	1	0	1	6
Above 5 5 .. .. 20	1	6	2	0
20 .. .. 30	2	0	2	6
30 .. .. 50	2	6	3	6
50 .. .. 100	3	6	4	6
100 .. .. 200	4	6	5	0
200 .. .. 300	5	0	6	0
300 .. .. 500	6	0	8	6
500 .. .. 1000	8	6	12	6
1000 .. .. 2000	12	6	15	0
2000 .. .. 3000	15	0	25	0
Above 3000	25	0	30	0

BONDS AND MORTGAGES.

	£	s.		£	s.
Any sum not exceeding £50	1	0	Above 1000 and not exceeding .. 2000	6	0
Above £50 and not exceeding .. 100	1	10	2000 3000	7	0
100 200	2	0	3000 4000	8	0
200 300	3	0	4000 5000	9	0
300 500	4	0	5000 10000	12	0
500 1000	5	0			

Bonds of every 1080 words above the first, 25s. Mortgages, 20s.

APPRENTICES' INDENTURES.

Under £30	£1	For £200 and under £300	£14
For £30 and under £50 ..	2	300 400	20
50 .. 100 ..	3	400 500	25
100 .. 200 ..	6	500 600	30

PROBATES OF WILLS AND LETTERS OF ADMINISTRATION.

Above the Value of £	And under. £	With a Will. £ s.	Without a Will.
20 ..	50	0 0 ..	10s.
20 ..	100	0 10 ..	—
50 ..	100	1 0 ..	£1
100 ..	200	2 0 ..	3
200 ..	300	5 0 ..	8
300 ..	450	8 0 ..	11
450 ..	600	11 0 ..	15
600 ..	800	15 0	22
800 ..	1000	22 0 ..	30
1000 ..	1500	30 0 ..	45
1500 ..	2000	40 0 ..	60
2000 ..	3000	50 0 ..	75
3000 ..	4000	60 0 ..	90
4000 ..	5000	80 0 ..	120
5000 ..	6000	100 0 ..	150
6000 ..	7000	120 0 ..	180
7000 ..	8000	140 0 ..	210
8000 ..	9000	160 0 ..	240
9000 ..	10000	180 0 ..	270

The scale continues to increase up to £1,000,000.

DUTIES ON LEGACIES.

Of the value of £20, or upwards, out of Personal Estate, or charged upon Real Estate, &c.; *and upon* every share of Residue—To a child, or parent, or any lineal descendant, or ancestor of the deceased, £1 per cent. To a Brother or Sister or their descendants, £3 per cent. To an Uncle, or Aunt, or their descendants, £5 per cent. To a Great Uncle or Great Aunt, or their descendants, £6 per cent. To any other Relation or Stranger in Blood, £10 per cent.—Legacy to Husband or Wife exempt.

If the deceased died prior to the 5th of April, 1805, the duty only attaches on Personal Estates, and by a lower scale.

LICENCES.

For Marriage, if special	£5 0
Ditto, if not special	0 10
For Bankers	30 0
For Pawnbrokers, within the limits of the twopenny post	15 0
Elsewhere	7 10
For Appraisers	0 10
For Hawkers and Pedlars, on foot	4 0
Ditto, with one horse, ass, or mule	8 0
Selling Beer, to be drunk on the Premises ..	3 3
Ditto, not to be drunk on the Premises ..	1 1

DOGS.

For every greyhound	£1 0 0
For every hound, pointer, setting dog, spaniel, terrier, or lurcher, and for every dog, where two or more are kept, of whatever denomination they may be (except greyhounds) ..	0 14 0
For every other dog, where one only is kept	0 8 0
Compounding a pack of hounds	36 0 0

Farmers with farms under £100 value, and shepherds, are exempt from dogs kept for the care of sheep.

WINDOW TAX.

Windows	Duty per Annum. £	s.	d.	Windows	Duty per Annum. £	s.	d.	Windows	Duty per Annum £	s.	d.	Windows	Duty per Annum. £	s.	d.
8	0	16	6	16	3	18	6	24	7	5	9	32	10	13	3
9	1	1	0	17	4	7	0	25	7	14	3	33	11	1	6
10	1	8	0	18	4	15	3	26	8	2	9	34	11	10	0
11	1	16	3	19	5	3	9	27	8	11	0	35	11	18	3
12	2	4	9	20	5	12	3	28	8	19	6	36	12	6	9
13	2	13	3	21	6	0	6	29	9	8	0	37	12	15	3
14	3	1	9	22	6	9	0	30	9	16	3	38	13	3	6
15	3	10	0	23	6	17	6	31	10	4	9	39	13	12	0

Farm-houses belonging to Farms under £200 a year are exempt.

*** By cap. 17, 3 and 4 Vict., an additional £10 per cent is imposed upon all the Assessed Taxes, Customs, and Excise.

DUTIES ON CARRIAGES WITH FOUR WHEELS.

No.	Per carriage for private use. £	s.	d.	No.	Stage coaches & post chaises. £	s.	d.
1	6	0	0	1	5	5	0
2	6	10	0	2	10	10	0
3	7	0	0	3	15	15	0
4	7	10	0	4	21	0	0
5	7	17	6	5	26	5	0
6	8	4	0	6	31	10	0
7	8	10	0	7	36	15	0
8	8	16	0	8	42	0	0
9	9	1	6	9	47	5	0

WITH TWO WHEELS.

	£	s.	d.
Carriages with two wheels, each	3	5	0
Ditto, drawn by two or more horses, or mules	4	10	0
For every additional body used on the same carriage ..	1	11	6
For every additional body	3	3	0
Carriages let by coachmakers, without horses	6	0	0

For every carriage with four wheels, being of less diameter than thirty inches each, where drawn by ponies or mules, above twelve and not exceeding thirteen hands, per annum, £3 5s.; if with less than four wheels, and the ponies not exceeding twelve hands, and not let for hire, exempt. For every carriage with four wheels, drawn by one horse and no more, per annum, £4 10s. Carriages with less than four wheels, drawn by one horse, without any metallic springs, and constructed and marked as described by Act 3 and 4, George IV., c. 39, and not exceeding £21 in value; also common stage carts, constructed for the carriage of goods, and occasionally used for riding, are exempt.

HORSE TAX. FOR RIDING OR DRAWING CARRIAGES.

No.	Each Horse. £.	s.	d.	No.	Each Horse. £.	s.	d.
1	1	8	9	11	3	3	6
2	2	7	3	12	3	3	6
3	2	12	3	13	3	3	9
4	2	15	0	14	3	3	9
5	2	15	9	15	3	3	9
6	2	18	0	16	3	3	9
7	2	19	9	17	3	4	0
8	2	19	9	18	3	4	6
9	3	0	9	19	3	5	0
10	3	3	6	20	3	6	0

	£.	s.	d.
Horses let to hire without post duty, and race-horses, each ..	1	8	9
Horses rode by butchers in their trade, each	1	8	9
Where two only are kept, the second at	0	10	6
Horses for riding, and not exceeding thirteen hands, each ..	1	1	0
One horse used by a bailiff on a farm	1	5	0
Other horses, thirteen hands high, and mules, each	0	10	6

A husbandry horse, occasionally ridden by any one occupying a farm of less annual value than £100 is exempt; as are also horses employed by market gardeners, in their business.

PENALTIES UNDER THE STAMP ACT.

For acting as an *Appraiser* without a license, £50.

For every *Appraisement* written upon paper not duly stamped, £50.

Apprentices' Indentures to state the real amount of premium in proportion to which the stamp duty is charged, on penalty of forfeiting double the amount of premium.

For *Attorneys* and *Solicitors* acting without having been admitted, £100.—For acting without certificate, £50.

For drawing a *Bill* or *Promissory Note* upon unstamped paper, £50.—For post-dating *Bills of Exchange*, £100.

For drawing a *Check* more than ten miles from the place where made payable, £100.—For receiving the same in payment, £20.—For Bankers paying the same, £100.

For setting out wrong amount in *Conveyance*. On the Attorney, £500. On the purchaser £50.

For selling *Patent Medicines*, &c., without a license, £20. Without a stamp, £10.

For printing a *Newspaper* without first making affidavit as to the ownership, &c., £100. For delaying to enter each publication at the Stamp Office, £100 For printing without stamps, on each paper issued, £20.

For neglecting or delaying to enter *Pamphlets* at the Stamp Office, or selling without paying duty when demanded, £20.

For *Pawnbrokers* taking pledges without a license, £50. For selling *Plate* without a license, £20. For selling plate without being duly stamped, £50.

For taking possession of the effects of any one deceased, without taking out *Letters of Administration*, £100.

HIGH WATER.

A TABLE of the difference between the Times of High Water at London Bridge and at the chief Ports and Places in Great Britain and Ireland, as formed from local Tide Tables, and the best works on Navigation:—

COAST OF ENGLAND.

		H. M.			H. M.
St. Agnes Lights	Add	2 23	Hull	Add	3 53
Aldborough		8 38	Humber River Entrance		3 23
Alderney Island		4 38	Ipswich		9 53
Arundel		9 8	Lands-end		2 23
Barnstaple Bar		3 23	Liverpool Dock		9 15
Beachy Head		9 43	Lynn Deeps		3 58
Bridgewater		4 38	Margate Pier	Subt.	2 2
Bridlington		2 23	Newcastle	Add	1 53
Bridport		3 53	Newhaven		9 43
Brighton		5 8	Nore Light	Subt.	0 58
Bristol		1 13	Orfordness	Add	8 33
Chatham	Subt.	9 23	Penzance		2 23
Chichester Harbour	Add	0 38	Plymouth Dock-yard		3 26
Coquet Island		3 49	Portland Roads		4 9
Cromer		2 23	Portsmouth Dock-yard		9 33
Cornwall Cape	Subt.	0 6	Ramsgate Harbour		9 13
Cuckold's Point		3 58	Rye Harbour		8 33
Dartmouth Harbour	Add	9 8	Scarborough		2 18
Deal		9 3	Scilly Islands		2 25
Dover Pier		0 38	Sheerness Dock-yard	Subt.	1 28
Downs (Stream)		0 38	Shields	Add	0 53
Dungeness		8 43	Shoreham Harbour		9 8
Eddystone Lighthouse		3 8	Southampton		9 33
Exmouth Bars		4 18	Spithead (Stream)		7 23
Falmouth		3 8	Spurn Lights		3 13
Flamborough Head		2 23	Sunderland		0 53
Foreland (North)		9 33	Torbay		3 58
Foreland (South)		9 8	Tynemouth Bar		0 43
Gravesend	Subt.	0 37	Weymouth		4 23
Guernsey Pier	Add	4 23	Whitby		1 38
Harwich		9 23	Whitehaven	Subt.	2 51
Hastings		8 29	Yarmouth Roads		6 33

COAST OF WALES.

		H. M.			H. M.
Aberdovy	Add	5 25	Cardigan Bar	Add	4 53
Aberystwith		5 23	Caernarvon Bar		7 13
Barmouth		5 48	Holyhead Bay		7 53
Beaumaris		8 19	Milford Haven		3 38
Carmarthen Bar		4 3	Pembroke Dockyard		3 57
Caldy Island		3 53	Swansea Bay		3 47

COAST OF SCOTLAND.

		H. M.			H. M.
Aberdeen Bar	Subt.	0 56	Kirkudbright	Add	9 8
Arran Island	Add	9 8	Leith Pier		0 15
Banff	Subt.	1 26	Lerwick Harbour		8 23
Cantyre (Mull)	Add	6 52	Lewis Island		3 53
Cromarty		9 38	Montrose	Subt.	0 22
Dee River	Add	10 38	Pentland Frith	Add	8 23
Dunbar		0 13	Perth		3 21
Duncansby Head	Add	6 8	Peterhead	Subt.	1 22
Dundee		0 18	Port Glasgow	Add	9 38
Eyemouth		0 8	Port Patrick		8 54
Galloway (Mull)		9 8	Stromness		6 53
Greenock		9 38	Tay Bar	Subt.	0 2
Inverness	Add	9 53	Wick	Add	9 0

COAST OF IRELAND.

		H. M.			H. M.
Achill Head	Add	3 53	Dublin Bar	Add	9 5
Bally Shannon Bar		3 23	Dundalk Bar		8 53
Baltimore		1 38	Dungarvon		2 23
Bantry Bay		1 39	Galway Bay		2 23
Belfast		7 58	Howth Harbour		9 1
Carlingford Bar		8 33	Killybegs		4 37
Cape Clear		1 53	Kingstown Harbour		9 6
Carrickfergus		8 22	Kinsale Harbour		2 23
Cork Harbour		2 23	Londonderry		3 54
Dingle Bay		1 23	Shannon Mouth		1 43
Donaghadee Pier		7 8	Sligo Bay		3 52
Donegal		2 58	Tralee Bay		1 38
Downing's Bay		3 13	Waterford Harbour		3 43
Drogheda		8 34	Wexford Harbour		5 22

COAST OF THE ISLE OF MAN.

		H. M.			H. M.
Air Point	Add	9 0	Douglas Harbour	Add	9 3

COAST OF ISLE OF WIGHT.

		H. M.			H. M.
Cowes	Add	8 38	Needles Point	Add	7 38
Dunnose		7 4	Yarmouth		7 24
Newport		Add 9 59			

To find the Time of High Water at any of these places we must proceed as follows:—Find the Time of High Water at London Bridge as given in the Calendar, and ADD the number opposite to the given place, or SUBTRACT it according as it has *Add* or *Subt.* prefixed to it; and the sum or difference is the time of High Water at that place. Attention must be paid to the following Notes:—

I. When the two numbers are added, if the sum be more than 12 hours, reject the 12 hours, and the remainder is the time of High Water in the afternoon, if the morning tide at London Bridge was taken, or the next day's morning tide, if the afternoon tide at London Bridge was taken.

II. If the interval at the given place is to be subtracted, and is greater than the time of High Water at London Bridge, increase the time at London Bridge by 12h., and then subtract, and the remainder is the time of *High Water* at the given place in the morning, if the afternoon tide at London Bridge was taken, or in the afternoon of the preceding day, if the morning tide was taken.

EXAMPLE.—Required the time of High Water at St. Agnes Lights and Aldborough on the 1st of January, also at Chatham on the 9th day of January.

The time of High Water at London Bridge is 4h. 15m. A.M., on Jan. 1.

St. Agnes Lights (from preceding table) Add	2	23
The sum is the time of High Water at St. Agnes Lights	6	38 A.M., on Jan. 1.

The time of High Water at London Bridge is 4h. 15m. A.M., on Jan. 1.

Aldborough (from preceding table) Add	8	38
The sum is	12	53

Reject 12h. and the time of High Water at Aldborough on Jan. 1, is 0h. 53m in the afternoon.

On the 9th day, the time of High Water at London Bridge is	0h.	4m. P.M.
Add 12h. to this is	12	4
Chatham (from preceding table) Subt.	1	13
The difference is	10	51

And, therefore, the time of High Water at Chatham, on January 9, is 10h. 51m. in the morning.

It must be borne in mind that the varying pressure of the atmosphere as well as the direction of strong winds, have a great effect on both the times and the heights of High Water. Thus, in the North Sea, a strong N.N.W. gale and a low barometer, will raise the surface two or three feet higher than usual, and cause the tide to flow half an hour longer all along the coast to London, than the predicted times in the calendar.

An E. a S.E., or a S.W. wind will produce an opposite effect, so that at times the prediction may be in error half an hour or more.—(*See foot note to page* 256 *of Greenwich Magnetical and Meteorological Observations for* 1841.)

CALENDAR OF THE JEWS, FOR THE YEAR 1846.

5606		1845		NEW MOONS AND FEASTS.
Tebeth	1	December	30	
	5	1846	3	Sabbath
	10	January	8	Fast: Siege of Jerusalem
Schebat	1		28	
	5		1	Elias
	9	February	5	Xylophoria
	23		19	Fast: Memory of the War of the Ten Tribes against Benjamin
Adar	1		27	
	7		5	Fast for the Death of Moses
	13	March	11	Fast: Esther
	14		12	Purim: Feast of Haman
	15		13	Schuschan Purim
Nisan	1		28	
	15		11	Passover begins
	16	April	12	Second day
	21		17	Seventh day
	22		18	Passover ends
	26		22	Fast: the Death of Joshua
Ijar	1		27	
			3	Consecration of the Temple
	14	May	10	Passah Schemi
	18		14	Lag Beomer
Sivan	1		26	Feast of the New Moon
	6		31	Pentecost Holidays, the Feast of Weeks
	7		1	Second day
	15	June	9	Victory of Maccabeus
Tamuz	1		25	
	18		12	Fast: Seizure of the Temple by Titus
Ab	1	July	24	
	10		2	Fast: Tishabeab. Destruction of the Temple
Elul	1	August	23	Selihot: beginning of the 40 days prayer
	3		25	Consecration of the walls of Jerusalem
	7		29	Fast of the end of the year 5606
	29		31	
5607			21	
Tisri	1			Feast of the new year, 5607
	2	September	22	Second day
	3		23	Fast: Death of Gedaliah
	7		27	Fast: for the Worship of the Golden Calf
	10		30	Fast: Day of Atonement
	15	October	5	Feast of Tabernacles
	16		6	Second day of *the Feast*
	21		11	Feast of Branches
	22		12	End of the Feast of Tabernacles
	23		13	Feast of the Law
Marchesvan	1		21	
	6		26	Fast: for the Destruction of Jerusalem
Kislev	1	November	20	
	25	December	14	Feast of the Dedication of the Temple
Tebeth	1		20	
	8		27	Fast
	9		28	Fast
	10		29	Fast: the Siege of Jerusalem

THE MONTHS OF THE TURKISH CALENDAR.

Hegira;	1262,	Moharrem 1	(New year)	falls on December 30, 1845.
..	..	Safar 1	.. ..	January 29, 1846.
..	..	Rebi el-Awwel 1	.. ..	February 27, ..
..	..	Rebi el-Accher 1	.. ..	March 29, ..
.	..	Dschemadi el-Awwel 1	.. ..	April 27, ..
..	..	Dschemadi el-Accher 1	.. ..	May 27, ..
..	..	Redscheb 1	.. ..	June 25, ..
..	..	Schaban 1	.. ..	July 25, ..
..	..	Ramadan 1	(Month of Fasting) ..	August 23, ..
..	..	Schewal 1	(Bairam) ..	September 22, ..
..	..	Dsû'l-Kade 1	.. ..	October 21, ..
..	..	Dsû'l-hedsché 1	.. ..	November 20, ..
..	1263,	Moharrem 1	(New Year) ..	December 20, ..

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Lord President of the Council	Lord Wharncliffe.
Lord Privy Seal	Duke of Buccleuch.
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Secretaries of State { Foreign	Earl of Aberdeen.
Secretaries of State { Colonial	Lord Stanley.
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President of the Board of Control	Earl of Ripon.
President of the Board of Trade	Earl of Dalhousie.
Chancellor of the Duchy of Lancaster	Lord George Somerset.
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Secretary of the Admiralty	Hon. Sidney Herbert.
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Clerk of the Ordnance	Lord Arthur Lennox
Surveyor-General of the Ordnance	Colonel Jonathan Peel
Attorney-General	Sir F. Thesiger
Solicitor-General	Sir F. Kelly
Judge-Advocate	Dr. Nicholl

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Lord Chancellor	Sir Edward Sugden
Chief Secretary	Sir Thomas Fremantle
Attorney-General	Right Hon. T. B. Smith
Solicitor-General	Richard Wilson Greene, Esq.

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Lord Advocate	Duncan McNeill, Esq.
Solicitor-General	Adam Anderson, Esq.

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Lord Chamberlain	Earl Delawarr.
Vice-Chamberlain	Lord E. Bruce.
Master of the Horse	Earl Jersey.
Clerk Marshal and Chief Equerry	Lord Charles Wellesley.
Treasurer of the Household	Earl Jermyn.
Comptroller of the Household	Hon. G. L. D. Damer.
Master of Buck-hounds	Earl Rosslyn.
Captain of the Yeomen of the Guard	Earl Beverley.
Captain of Gentlemen at Arms	Lord Forester.
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Ladies of Bedchamber	Countess Dunmore, Countess of Mount Edgcumbe, Marchioness of Douro, Viscountess Canning, Lady Portman, Countess of Charlemont, Countess of Gainsborough, Viscountess Jocelyn.

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Treasurer and Private Secretary	George Edward Anson, Esq.
Lords of Bedchamber	Lord G. Lennox, and Marquis of Granby.
Equerries	Lieut-Col. Bouverie, Lieut-Col. Wylde, Major-Gen. Sir Edward Bowater.
Grooms of Bedchamber	General Sir Geo. Anson, Capt. Francis Seymour.
Clerk Marshal	Major-Gen. Sir W. Wemyss.
Physicians	Sir James Clark, Dr. Holland, Dr. Forbes.
Surgeons	Sir Benjamin Brodie, Bart., Benjamin Travers, Esq., Charles Aston Key, Esq.
Surgeon Dentist	Alex. Nasmyth, Esq.
Chemist and Druggist	Peter Squire, Esq.

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Liverpool, Walter Skirrow, Esq., and Charles Phillips, Esq.
Manchester, Ebenezer Ludlow, Esq., Sergeant, and William Thomas Jemmett, Esq.
Leeds, Martin John West, Esq., and Montague Bere, Esq.
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Exeter, Edward Goulburn, Esq., Sergeant
Newcastle, N. Ellison, Esq.

CITY OFFICERS.

LORD MAYOR.

Elected September 29th—Sworn in November 8th.
The Right Honourable John Johnson, Dowgate, 1835.

SHERIFFS.

Elected 24th June—Sworn in 28th September.
William James Chaplin, Esq. John Laurie, Esq.

UNDER SHERIFFS.

Mr. F. T. Bircham. Mr. David Williams Wire.

ALDERMEN.

THE FOLLOWING HAVE NOT PASSED THE CHAIR.

Wood, Thomas, Esq., Cordwainer; 3, Corbet-court, Gracechurch-street	1835
Carroll, Sir George, Kt., Candlewick; 34, Cavendish-square	1840
Hooper, John K., Esq., Queenhithe; 20, Queenhithe	1840
Duke, Sir James, Kt., M.P., Farringdon Without; Botolph-lane	1840
Farncomb, Thomas, Esq., Bassishaw; Griffin's Wharf, Southwark	1840
Musgrove, John, Esq., Broad-street; 18, Old Broad-street	1842
Hunter, William, Esq., Coleman-street; 10, Finsbury Circus	1843
Challis, Thomas, Esq., Cripplegate; 32, Wilson-street, Finsbury	1843
Hughes, Hughes William, Esq., Bread-street; 17, Great Distaff-lane	1843
Sidney, Thomas, Esq., Billingsgate; 8, Ludgate-hill	1844
Moon, F. G. Esq., Portsoken; 20, Threadneedle-street	1844

THE FOLLOWING HAVE PASSED THE CHAIR.

Hunter, Sir C. S., Bart., Bridge Without; 23, Euston-square	1804
Lucas, M.P., Esq., Tower; 21, Water-lane	1821
Thompson, W. Esq., M.P., Cheap; Upper Thames-street	1821
Key, Sir John, Bart., Langbourn; 9, King's Arms-yard	1823
Laurie, Sir Peter, Knt., Aldersgate; 7, Park-square, Regent's-park	1826
Farebrother, C. Esq., Lime-street; 6, Lancaster-place, Strand	1826
Copeland, W. Esq., M.P., Bishopsgate; 37, Lincoln's Inn-fields	1829
Kelly, T. Esq., Farringdon Within; 17, Paternoster-row	1830
Wilson, Samuel, Esq., Castle Baynard; 24, St. Paul's Church-yard	1831
Marshall, Sir C., Knt., Bridge Within; 43, Russell-square	1832
Pirie, Sir John, Bart., Cornhill; 71, Cornhill	1834
Humphery, J. Esq., M.P., Aldgate; Hays's Wharf, Southwark	1835
Magnay, Sir William, Bart., Vintry; College-hill	1838
Gibbs, Michael, Esq., Walbrook; 33, Walbrook	1838

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Admiralty Advocate, J. Phillimore, D.C.L.
Judge Advocate, H. J. Shepherd, Esq.
Queen's Proctor, Francis Hart Dyke, Esq.
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Consul, Colonel Thomas Aspinwall, 1, Bishopsgate Churchyard.
Agent for the Legation, Mr. J. Miller, 26, Henrietta-street, Covent-garden.

AUSTRIA.

Ambassador Extraordinary and Plenipotentiary, his Excellency Count Maurice Dietrichstein, Chandos-house.
Consul General, Lionel N. de Rothschild, New-court, St. Swithin's-lane.

BRAZILS.

Minister, Commandeur Jose Marques Lisboa.
Vice Consul in London, Antonio da Costa, 148, Fenchurch-street.

BAVARIA.

Consulate Office, 11, Bury-court, St. Mary Axe.
Envoy Extraordinary and Minister Plenipotentiary, Baron de Cetto, 3, Hill-street, Berkeley-square.
Consul General, Adolphus Frederick Schaezler, Esq.

BADEN.

Consulate, 1, Riches-court, Lime-street.
Consul, John Simson.

BELGIUM.

Consulate Office, 3, Copthall-court, Throgmorton-street.
Envoy Extraordinary and Minister Plenipotentiary, M. Sylvain Van de Weyer, K.C.H., 50, Portland-place.
Consul, H. Castellain.

BUENOS AYRES.

Consular Office, 1, Winchester-buildings, Old Broad-street.
Minister Plenipotentiary, Don Manuel Moreno, 23, Upper Wimpole-street, Cavendish-square.
Consul General, G. F. Dickson, 20, Hanover-terrace, Regent's Park.

DENMARK.

Minister, his Excellency Count Reventlow, 52, Wilton-crescent.
Consul General, Fletcher Wilson, 6, Warnford-court, Throgmorton-street.

FRANCE.

Consulate Office, 3, Copthall-buildings, Throgmorton-street.
Ambassador Extraordinary and Minister Plenipotentiary, His Excellency Count St. Aulaire.
Consul General, Durant St. André, 44, Montague-square.

FRANKFORT-ON-THE-MAINE.

Consulate Office, 12, Broad-street-buildings.
Consul, John George Behrends.

GREECE.

Consulate Office, 25, Finsbury-circus.
Consul-General, Pandia Ralli, 25, Finsbury-circus.

HANOVER.

Consulate Office, 6, Circus, Minories.
Minister, Count Kielmannsegge, 44, Grosvenor-place.
Consul General, Sir J. Hall, K.C.H., St. Katherine's Dock-house.

MEXICO.

Consulate Office, 1, Great Winchester-street, City.
Minister and Envoy Extraordinary, Don Tomas Murphy, 7, Sussex-place, Regent's-park.

NETHERLANDS.

Every Extraordinary and Minister Plenipotentiary, M. Dedel, 25, Wilton-crescent.
Consul General, J. W. May, 123, Fenchurch-street.

NEW GRENADA.

Chargé d'Affaires, M. M. Mosquera, 52, Baker-street, Portman-square.
Consul, Im. Suenz, Esq., 3 Winchester-buildings, Great Winchester-street, Old Broad-street.

OLDENBURGH.

Consulate Office, 48, Fenchurch-street.
Consul General, H. F. Tiarks.

PORTUGAL.

Consular Office, 5, Jeffrey's-square.
Envoy Extraordinary, Baron da Torre de Moncorvo, 57, Upper Seymour-street.
Consul General, F. I. van Zeller, 40, Dorset-square.

PRUSSIA.

Consulate Office, 106, Fenchurch-street.
Envoy Extraordinary and Minister Plenipotentiary, Chevalier Bunsen.
Consul General for Great Britain and Ireland, Chevalier B. Hebeler, K.R.E., 15, York-place, Baker-street.

RUSSIA.
Consulate Office, 2, Winchester-buildings, Old Broad-street.
Ambassador Extraordinary and Plenipotentiary, Baron de Brunow, Ashburnham-house, Dover-street, Piccadilly.
Consul General, George Krehmer, Esq.

SARDINIA.
Consulate Office, 31, Old Jewry.
Minister, H. E. the Count de Pollon, 11, Lower Grosvenor-street.
Consul General, J. B. Heath, 66, Russell-square.

SAXONY.
Consulate Office, 76, Cornhill.
Resident Minister, Baron de Gersdorff, Chester-square, Pimlico.
Consul General, James Colquhoun, 12, St. James's-place.

HANSEATIC REPUBLICS OF LUBECK, BREMEN, AND HAMBURGH.
Diplomatic Agent and Consul General, James Colquhoun, Esq., 12, St. James's-place; Consulate Office, 76, Cornhill.

SICILY.
Consulate Office, 15, Cambridge-street, Hyde Park-square.
Ambassador Extraordinary, Prince de Castelcicala, 15, Princes-street, Cavendish-square.
Consul General, Henry Swenburn Minasi.

SPAIN.
Envoy Extraordinary and Minister Plenipotentiary, the Duke of Sotomayor, 9, Cavendish-square.
Consulate, 37, Old Broad-street.
Consul General, Chevalier Don Jose Maria Barriero.

SWEDEN AND NORWAY.
Consulate Office, 2, Crosby-square.
Chargé d' Affaires, Baron de Rehausen, 14, Halkin-street, West.
Consul General, Charles Tottie, Esq., 52, Montague-square.

SWITZERLAND.
Consul Office, a 24, Gresham-street,
Agent and Consul General, J. L. Prevost.
Vice Consul, G. Prevost.

TURKEY.
Ambassador Extraordinary, His Excellency Ali Effendi.
Consulate Office, 1, Bryanstone-square.
Consul General, Edward Zohrab, Esq., 1, Bryanstone-square.

TUSCANY.
Consulate Office, 15, Angel-court, Throgmorton-street.
Consul, James Christian Clement Bell.

WURTEMBURG.
Consul General, Bernard Hebeler, 15, York-place, Baker-street.
Consulate Office, 106, Fenchurch-street.

EAST INDIA COMPANY.

Six Directors are elected annually in April, when six go out by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

DIRECTORS.

(2) Chairman, John Shepherd, Esq., Mansfield-street
(3) Deputy Chairman, Sir Henry Willock, K.L.S., Little Campden House, Kensington

(2 Alexander, Henry, Esq.
(1) Astell, William, Esq., M.P.
(1) Bayley, W. Butterworth, Esq.
(2) Bryant, Major-Gen. Sir Jeremiah
(3) Campbell, Sir Robert, Bart.
(1) Elliot, Russell, Esq.
(1) Galloway, Major-Gen. Archibald
(3) Hogg, James Weir, Esq., M.P.
(1) Jenkins, Sir Richard, G.C.B.
(4) Lushington, Major-Gen. Sir J. Law
(4) Lyall, George, Esq., M.P.
(4) Macnaughten, Elliot, Esq.
(1) Masterman, John, Esq., M.P.
(4) Muspratt, John Petty, Esq.
(2) Oliphant, Major James
(3) Robertson, Major-Gen. Archd.
(4) Smith, Martin, T. Esq.
(3) Sykes, Lieut.-Col. W. H.
(2) Warden, Francis, Esq.
(3) Whiteman, John Claremont, Esq.
(4) Wigram, William, Esq.
(2) Young, Sir William, Bart.

Secretary, James Cosmo Melville, Esq.
Deputy-Secretary, John D. Dickinson, Esq.

DISTANCES,

IN ENGLISH MILES,

OF THE PRINCIPAL TOWNS FROM LONDON,

To which are added, these between some of the Continental Towns.

	Miles.		Miles
Abbeville	190	Havre, by Southampton	198
Aix-la-Chapelle	330	Heidelberg	589
Amsterdam	248	Kehl	684
Arnhem	270	Leghorn	1240
Baden-Baden	650	Leipzig, from Frankfort O. M.	210
Basel	780	Liege	300
Berlin	644	Lyons, from Paris	290
Berlin, from Hamburgh	175	Mainz	517
Berne	830	Maunheim	571
Bieberich	510	Milan	942
Bonn	420	Milan, from Venice	200
Bordeaux, from Paris	346	Magdeburg, from Hamburg	157
Breslau, from Berlin	202	Magdeburg, from Leipzig	74
Breslau, from Dresden	154	Magdeburg, from Dresden	134
Brussels	250	Marseilles, from Paris	500
Carlsruhe	625	Munich, from Frankfort O. M.	214
Caub	485	Munich, from Vienna	276
Coblentz	458	Moscow	1396
Cologne	400	Naples	1450
Constance	820	Neurenberg, from Frankfort O. M.	126
Dijon, from Paris	318	Neurenberg, from Leipzig	159
Dresden, from Prague	94	Offenburg	698
Dusseldorf	368	Prague, from Vienna	196
Elberfeld	388	Prague, from Frankfort O. M.	290
Emmerich	300	Prague, from Dresden	94
Florence	1160	Paris, by Brighton	241
Frankfort O. M.	544	Paris, by Southampton	340
Frieburg	739	Rome	1380
Gand	177	Rouen, by Brighton	157
Geneva	1080	Rouen, by Southampton	256
Gratz, from Vienna	120	Stuttgardt	678
Hague	212	Schaffhausen	790
Havre, by Brighton	137	St. Petersburgh, from Berlin	1060

	Miles.		Miles
Strasbourg, from Paris	285	Vienna, from Trieste	319
Trieste, from Venice	319	Venice, from Milan	200
Utrecht	230	Wiesbaden	520
Vienna, from Frankfort O. M.	437	Zurich	830

BANK OF ENGLAND.

The alteration in the Bank Direction takes place in April.

GOVERNORS.

John Benjamin Heath, Esq., Governor.
William R. Robinson, Esq., Deputy-Governor.

DIRECTORS.

Chapman, Edward Henry, Esq.
Cotton, William, Esq.
Grenfell, Charles Pascoe, Esq.
Gower, Abel Lewes, Esq.
Hanson, John Oliver, Esq.
Hodgson, Kirkman Daniell, Esq
Holland, Henry Lancelot, Esq.
Hubbard, John Gellibrand, Esq.
Hunt, Thomas Newman, Esq.
Huth, Charles Frederick, Esq.
Latham, Alfred, Esq.
Lyde, William, Esq.
Malcolmson, James, Esq.
Morris, James, Esq.
Norman, George Warde, Esq.
Pattison, James, Esq
Pearse, Christopher, Esq.
Pelly, Sir John Henry, Bart.
Powell, David, Esq.
Reid, Sir John Rae, Bart.
Smith, Thomas Charles, Esq.
Thompson, William, Esq. & Alderman.
Weguelin, Thomas Matthias, Esq.
Wilson, Francis, Esq

Secretary, John Knight; Dep. Sec., John Bentley; Assistant, James Stewart; Chief Accountant, William Smee; Deputy, George Earle Gray; Assistant, J. P. Noble; Chief Cashier, Matthew Marshall; First Assistant, J. R. Elsey; Second Assistant, Thomas Bros.

THE BANK OF ENGLAND HAS BRANCH ESTABLISHMENTS IN THE FOLLOWING TOWNS.

Birmingham—Bristol—Gloucester—Hull—Leeds—Liverpool—Manchester—Newcastle-upon-Tyne—Norwich—Plymouth—Portsmouth—Swansea—Leicester.

LONDON BANKERS.

Bank of England, Threadneedle-street
Bank of Australia, 2, Moorgate-street
Bank of British North America, 7, St. Helen's-place, Bishopsgate Within
Bank of Ceylon, 72, Old Broad-street
Barclay, Bevan, and Tritton, 54, Lombard-street
Barnard, Dimsdale, Barnard and Co., 59, Cornhill
Barnett, Hoare, and Co., 62, Lombard-street
Bosanquet, Anderton, Franks, and Co., 73, Lombard-street
Bouverie, Norman, and Murdoch, 11, Haymarket
British Colonial Bank and Loan Company, 50, Moorgate-street
Brown, Janson, and Co., 32, Abchurch-lane
Buet, James, Son, and Co., 85 and 86, Cheapside
Call, Sir W. P., Marten, and Co., 25, Old Bond-street
Champion and Co., 11, West Smithfield
Child and Co., 1, Fleet-street, Temple Bar
Cocks, Biddulph, and Co., 43, Charing Cross
Cockburn and Co., 4, Whitehall
Colonial Bank, 13, Bishopsgate Within
Commercial Bank of London, 3, Moorgate-street, and 5 and 6, Henrietta-street, Covent-garden
Coutts and Co., 59, Strand
Cunliffes, Brooks, and Co., 29, Lombard-street
Cunliffe, Roger, 34, Bucklersbury
Curries and Co., 29, Cornhill
Davies, Robt, and Co., 187, Shoreditch
De Lisle, Janvrin, and Co., 16, Devonshire-square, Bishopsgate
Denison, J., Heywood and Co., Lombard-street
Dixons, Brooks, and Dixon, 25, Chancery-lane
Drewett and Fowler, 4, Princes-street, Bank
Drummonds and Co., 49, Charing Cross
Feltham, John, and Co., 42, Lombard-street
Fullers and Co., 65, Moorgate-street
Glyn, Sir R. Carr, Bart., and Co., 67, Lombard-street
Goslings and Sharpe, 19, Fleet-street
Hanburys, Taylor, and Lloyd, 60, Lombard-street
Hankeys and Co., 7, Fenchurch-street
Herries, Farquhar, and Co., 16, St. James's-street
Hill and Sons, 17, West Smithfield
Hoares, 37, Fleet-street
Hopkinson, Barton, and Co., 3, Regent-street, Waterloo-place
Ionian Bank, 6, Great Winchester-street
Ireland, Provincial Bank of, 42, Old Broad-street
Ireland, National Bank of, 13, Old Broad-street
Johnston and Co., 15, Great Bush-lane
Jones Loyd, and Co., 43, Lothbury
Jones and Son, 41, West Smithfield
Kinloch, G. F. and Sons, 1, New Broad-street
London and Dublin Bank, 19, and 20, Austin Friars
London Joint Stock Bank, Princes-street, Bank, and 69, Pall-Mall
London and Westminster, Lothbury
9, Waterloo-place,
213, High Holborn
3, Wellington-street, Borough
87, High-street, Whitechapel
Stratford-place, Oxford-street
London and County Joint Stock Banking Company, 71, Lombard-street, and 37, West Smithfield
Lubbock, Sir J. W., and Co., 11, Mansion-house-street
Martin, Stones, and Martin, 68, Lombard-street
Masterman, Peters, and Co., 35, Nicholas-lane
National Provincial Bank of England, 112, Bishopsgate-street Within
Pickstock and Co., 39, Clement's-lane
Praed, Fane, Praed, and Johnson, 189, Fleet-street
Prescott, Grote, Ames and Co., 62, Threadneedle-street
Price, Sir C., Bart., and Co., 3, King William-street
Pocklington and Lacy, 60, West Smithfield
Puget, Bainbridge, and Co., 12, St. Paul's
Ransom and Co., Pall-mall East
Robarts, Curtis, and Co., 15, Lombard-street
Rogers, Olding, and Co., 29, Clement's-lane
Royal Bank of Australia, 2, Moorgate-street, City
Scott, Sir C., Bart., and Co., 1, Cavendish-square
Smithfield Agency and Banking Company, 59, West Smithfield
Smith, Payne, and Co., King William-street
Stallard, W. H., 76, West Smithfield
Strahan, Pauls, and Bates, 217, Strand
Spooner, Attwood, and Co., 27, Gracechurch-street
Stevenson, Salt, and Sons, 20, Lombard-street
Stone, Martin, and Stones, 68, Lombard-street
Stride and Sons, 6, Copthall-court
Tisdale, T. G., 15, West Smithfield
Twinings, Rich., G. J. A., and Nich., 215, Strand
Vere, Sapte, Banbury, and Co., 77, Lombard-street
Weston and Young, Wellington-street, Borough
Williams, Deacon, and Co., 20, Birchin-lane
Willis, Percival, and Co., 76, Lombard-street
Union Bank of London, 8, Moorgate-street
Argyll-place, Regent-street, and Pall-Mall. East

GENERAL POSTAL REGULATIONS.

HEADS OF DEPARTMENTS.

Postmaster General, Earl Lonsdale; Secretary, Lieut.-Col. W. L. Maberly; Assistant Secretary, T. Lawrence, Esq.; Chief Clerk to the Secretary, J. Campbell, Esq.; Solicitor, Mark B. Peacock, Esq.; Surveyor and Superintendent of Mail Conveyance and Guards, G. Stow, Esq.; Accountant General, C. T. Court, Esq.; Receiver General, T. Young, Esq. Inspector of Ship Letters, G. Huddlestone, Esq.; Inspector of the Dead Letter Office, K. Newton, Esq; President of the Money Order Office, W. Barth, Esq.; Superintending-president of the Inland and Foreign Department, W. Bokenham, Esq.; Inspector of the Carriers (general post), F. Kelly, Esq. ;Superintending-president of the London District Post, R. Smith, Esq.

INLAND REGULATIONS.

RATES OF POSTAGE.

All letters from one part of Great Britain to another (including the Local Penny Posts and the London Twopenny Post) are charged by weight as follows, if prepaid :—

Not exceeding half an ounce	..	..	1d.
Exceeding half an ounce, and not exceeding 1 ounce	..	..	2d.
.. 1 ounce ..... 2 ounces	..	..	4d.
.. 2 ounces ..... 3 ounces	..	..	6d.

and so on at the rate of 2d. for every additional ounce or fraction of an ounce.

Unpaid and unstamped letters, are charged double postage on delivery; letters insufficiently paid or stamped, are charged double the amount of such insufficiency on delivery.

Letters or packets exceeding 16 ounces in weight not forwarded—except,
Parliamentary petitions and addresses to Her Majesty
Parliamentary proceedings
Letters or packets addressed to, or received from, places beyond sea
Letters or packets to and from public departments and public officers.

PRICES OF STAMPS.

At a Post Office.—Labels, 1d. and 2d. each; Covers, 2s. 3d. per two dozen.

At a Stamp Distributor's, as above, or as follows.—Half-ream, or 240 Penny Covers, £1 2s. 4d.—Penny Envelopes, £1 1s. 9d. Quarter-ream, or 120 Twopenny Covers, £1 1s. 4d.—Twopenny Envelopes, £1 1s. 1d.

At the Stamp Offices in London, Dublin, and Edinburgh, as above, or as follows.—2 Reams, or 960 Penny Covers, £4 7s.—Penny Envelopes, £4 5s. 1 Ream, or 490 Twopenny Covers, £4 3s. 6d.—Twopenny Envelopes, £4 2s. 6d. Covers may be had at these prices, either in sheets or cut ready for use. Envelopes in sheets only, and consequently not made up. No one, unless duly licensed, is authorised to sell postage stamps.

The Penny Stamp carries half an ounce (inland), the Twopenny Stamp one ounce. For weights exceeding one ounce, use the proper number of labels, either alone, or in combination with the Stamps of the Covers or Envelopes.

HOURS OF POSTING.

FOR THE EVENING MAILS.

The receiving houses close at 5 30 P.M. Letter carriers ring bells and take letters in the streets to go by the evening mails from 4 50 to 5 30 P.M., (with such letter one penny fee is charged as a perquisite to the postman). Letters are received for the evening's dispatch at the Branch Post-offices at Charing-cross, Old Cavendish-street, and 108. Blackman-street, Southwark, until 6 P.M., and, with a fee of one penny, which must be paid by affixing a stamp to the letter, until 6 45 P.M. At the Branch Post-office in Lombard-street, the box remains open without additional fee until 6 P.M., and until 7 P.M., by affixing a penny stamp. At the General Post-office in St. Martin's-le-grand until 6, free, and 7 by payment of the extra charge as at Lombard-street. From 7 to half-past 7 P.M., letters may be posted there upon payment of a fee of sixpence each, which must, as well as the postage, be prepaid. Letters intended to pass by outward mails to foreign parts must be posted at the above hours. In the case of Colonial and ship letters, however, there is this difference :—The "late" fee of one penny must be paid in money. Foreign letters are taken in at the Branch offices as follows :—Tuesdays and Fridays at Charing-cross, Old Cavendish-street, and 108, Blackman-street, Southwark, until 1 P.M.; at the office in Lombard-street, and the General Post-office in St. Martin's-le-grand, only from 10 15 P.M., on payment of a fee of one penny, and from 10 15 P.M., till 10 30, on payment of a fee of sixpence.

N.B. Newspapers for the evening mails must be put into the receiving houses before 5 P.M., the Branch offices before 5 30, or General Post-office before 6 P.M. They may also be posted by letter carriers ringing bells from 4 30 P.M. to 5 30 P.M. with the penny fee to the postman. From 6 P.M. to 7 30, they may be put into the office on the left hand side of the portico, and at the nearest window to it on the western front on payment of one halfpenny late fee. Subjoined is a list—the latest officially published—of the post towns to which bags are made up per morning mails.

Abingdon	Brighton	Darlington
Accrington	Bristol	Dartford
Alnwick	Brough	Daventry
Andover Road	Buckingham	Derby
Appleby	Burnley	Dorking
Ashford	Bury St. Edmund's	Dover
Attleborough	Cambridge	Dunmow
Banbury	Canterbury	Dursley
Bangor	Carlisle	Durham
Bath	Carnarvon	Ely
Barnsley	Chatham	Exeter
Basingstoke	Chelmsford	Fairford
Battle	Cheltenham	Fareham
Beaumaris	Chepstow	Farringdon
Belford	Chester	Felton
Belper	Chester-le-Street	Fenny Stratford
Berkhampstead	Chesterfield	Feversham
Berwick	Chippenham	Folkstone
Bilston	Chorley	Gateshead
Birmingham	Cirencester	Gloucester
Bishops Stortford	Clitheroe	Godalming
Blackburn	Cockermouth	Gosport
Bolton	Colchester	Grantham
Brackley	Conway	Gravesend
Bradford, Yorks	Coventry	Guernsey
Brandon	Cowes	Guildford
Brenwood	Cranbrook	Halifax
Bridgewater	Cuckfield	Hastings
Hemel Hempstead	Nottingham	Swindon
Hertford	Northallerton	Taunton
Highworth	Oxford	Tenterden
Hoddesdon	Penkridge	Tetbury
Holyhead	Penrith	Thetford
Holywell	Portsmouth	Thirsk
Huddersfield	Preston	Towcester
Hurst Green	Preston Brook	Tring
Hythe	Pwllheli	Tunbridge
Ipswich	Ramsgate	Tunbridge Wells
Jersey	Reading	Ulverstone
Kelveden	Reigate	Uxbridge
Kendal	Rickmansworth	Wakefield
Kenilworth	Ripon	Wallingford
Lancaster	Rochdale	Walsall
Leamington	Rochester	Ware
Lechlade	Rotherham	Warrington
Leeds	Rugby	Warwick
Leicester	Ryde	Watford
Leighton Buzzard	Rye	Wednesbury
Lewes	Saffron Walden	Weedon
Liverpool	Seven Oaks	Wellington, Salop
Longhboro'	Sheffield	Wellington, Som.
Maidenhead	Shiffnall	West Bromwich
Maidstone	Sittingbourne	Whitehaven
Manchester	Shoreham	Wigan
Margate	Shrewsbury	Wigton
Maryport	Slough	Winchester
Melton Mowbray	South Shields	Windsor
Milnthorpe	Southampton	Witham
Mold	Staplehurst	Wolverhampton
Monmouth	St. Alban's	Workington
Morpeth	St. Asaph	Worthing
Newcastle, Staff.	St. Leonard's	Wotten-under-Edge
Newcastle-on-Tyne	Stafford	Wymondham
Newmarket	Stockport	Yarmouth
Newport, I. of W.	Stone	York
Newport Pagnel	Stony Stratford	
Northampton	Stratford-on-Avon	
North Shields	Stroud	All Ireland
Norwich	Sunderland	All Scotland

For all the above places, the letter boxes at the Receiving Houses will be open till seven, A.M. for the newspapers, and eight, A.M. for letters; and those at the Branch Offices, Charing-cross, Old Cavendish-street, and the Borough, for newspapers until half-past seven, A.M., and for letters until eight, A.M. At the General Post Office and the Branch Office in Lombard-street, the boxes will close for newspapers at a quarter before eight, A.M., and for letters at half-past eight, A.M.

LETTER-RATES TO PLACES BEYOND THE LIMITS OF THE UNITED KINGDOM.

WEST INDIA AND AMERICA RATES.

	Packet Rates, paying the Postage optional, excepting those places marked *, which must be paid with. Under half oz. s.	d.
North America, viz. :—Quebec, Montreal, and all parts of *Canada; Nova Scotia (Halifax excepted). Prince Edward's Island, and New Brunswick, conveyed direct by the contract packets (being one shilling packet postage, and twopence uniform interval colonial rate) ..	1	2
Halifax, Newfoundland, *New York, the Bermudas, and the *United States	1	0
British West Indies, &c., including Kingston (Jamaica), Barbadoes, New Providence, Turk's Island, Bahamas, Antigua, Cariacou, Demerara, Dominica, Grenada, St. Lucia, Monserrat, Nevis, St. Vincent's, St. Kitt's, Tobago, Tortola, and Trinidad	1	0
Foreign West Indies, including *Guadaloupe, *Martinique, *St. Thomas, *Curacoa, *Surinam. *St. Martin's, *St. Croix, and Porto Rico	1	5
Jamaica (all the island, except the packet-port, Kingston) and Berbice	1	2

Letters to the West Indies are forwarded at the above uniform rates from all parts of the United Kingdom.

All Letters addressed to North America will be considered as intended to be forwarded by the contract steam packets, and charged accordingly, unless the words, "By Private Ship" be plainly written *on them.*

SHIP LETTER RATES.

The single uniform rate on letters between the United Kingdom and places beyond sea, when conveyed by private ships, is 8d., in whatever part of the United Kingdom the letters may be posted or delivered. This is the rate now taken on letters between the United Kingdom and the East Indies, &c., &c., when conveyed by private ship, the former distinction between these and other descriptions of ship letters having been abolished.

The rates of postage on "Ship," as on other letters are taken by weight :—

Under half an ounce	Single.
Under an ounce	Double.
Under two ounces	Quadruple.
Under three ounces	Sextuple and so on.

PERSONS EXEMPT FROM SHIP LETTER POSTAGE.

The Owners, Charterers, or Consignees (resident in the United Kingdom), and the Owners, Consignees, and Shippers of Goods on board vessels inward bound, are entitled to receive their letters free from sea postage, to the extent collectively of six ounces in weight, by any one vessel to any one such person. In the case of vessels coming from Ceylon, the Mauritius, the East Indies or the Cape of Good Hope, for an Owner, Charterer, or Consignee of such vessel, the letters may be collectively twenty ounces in weight. The Owner, Charterer, or Consignee, must be described as such on the address and superscription; and in the case of Owners, Shippers, or Consignees of goods, it must also appear by the Ship's Manifest that they have goods on board the vessel. Such persons are entitled to have their letters, which come within the above conditions, before the master of the vessel delivers the other letters in his charge to the post-office.

*** Every person who shall, with intent to evade any duty of postage,

falsely superscribe a letter as being the Owner, or the Charterer, or the Consignee of a vessel conveying the same, or as the owner, or the Shipper, or the Consignee of goods shipped in such vessel, shall for every such offence forfeit Ten Pounds.

MONEY.

Coin, if enclosed in letters at all, should be folded in paper, sealed, and then fastened to the inside of the letter; but to avoid risk, a money order should be used whenever practicable. A letter may be registered on the payment of 1s. only.

FOREIGN LETTERS.

The packet rates are too various to be enumerated here. As regards both foreign and colonial letters, there is no limitation as to weight. All sent outwards, with few exceptions, must be prepaid by money or by stamps; and those going by private ship must be marked "ship letter."

It is requested that all letters may be fully and legibly addressed, and posted as early as convenient. Also, that whatever kind of stamp may be used, it may invariably stand above the address, and towards the right hand side of the letter.

There are "made up" in London the following Mails, as specified by the notices to the public, issued by the Post-Master-General:—

France, daily, due daily, under ½ oz., postage 10d.

Belgium, daily, due daily, under ½ oz., postage 1s.

Holland, Tuesday and Friday, due Monday and Thursday, under ½ oz., postage 1s.

Hamburg, Sweden, and Norway, Tuesday and Friday, due Tuesday and Saturday, but usually arrive on previous day, under ½ oz., postage 6d., Sweden and Norway, postage 1s. 8d. under ½ oz.

Inland rates:—Dublin, twice a-day, due twice a-day.

Ditto, Waterford, daily, due daily,

Ditto, Donaghadee, daily, due daily.

Ditto, Guernsey and Jersey, Tuesday, Thursday, and Saturday, due Tuesday, Thursday, and Saturday.

Lisbon, Madeira, Vigo, Cadiz, Corunna, Oporto, and Gibraltar, 7th, 17th, and 27th, of every month.

Malta, Greece, and Ionian Islands, *viâ* Southampton, twice in each month, viz.:—on the 3rd and 20th of every month.

Syria, Egypt, and India, *viâ* Southampton, 3rd and 20th in each month.

Brazil, Buenos Ayres, Madeira, and Canary Islands, 1st Tuesday in each month.

British North Ameriea, Bermuda, and United States, 3rd and 18th of every month, except in the winter months, December, January, February, and March, and then on the 3rd only,

Jamaica, Leeward Islands, Hayti, Porto Rico, and Cuba, mornings of the 2nd and 17th of every month.

Mexico, Panama, New Granada, and Venezuela, mornings of the 2nd of every month.

The Mails despatched for Vigo, Oporto, Lisbon, Cadiz and Gibraltar are forwarded by steam vessels from Southampton to Gibraltar.

The Mails of the 3rd and 20th in each month are forwarded by the same packet from Southampton to Alexandria; leaving Mails at Malta.

The Mails for Greece and the Ionian Islands are conveyed from Malta every fortnight, by steam packets, which start after the arrival of the Mails from England.

The Mails for Egypt and India are forwarded direct from Southampton on the 3rd and 20th of each month, by steam packets.

From August to January inclusive, the packet touches at Pernambuco and Bahia, on her outward passage to Rio Janeiro, and the other six months on her homeward.

RATES OF POSTAGE WITHIN BRITISH NORTH AMERICA.

Letters forwarded to or from British North America by the Liverpool packets, or by private ships, passing direct between the United Kingdom and British America, are charged with an uniform Colonial rate of twopence the half ounce when posted or delivered at any other towns than the ports of Halifax, Nova Scotia, or St. John's, Newfoundland.

MONEY ORDERS.

Orders for sums not exceeding £2 are charged threepence; not exceeding £5, sixpence; above £5 no money order can be obtained. They are granted and paid between the hours of ten and four daily: they are paid only to the person for whom they were obtained, but he may depute another person to receive the money by signing the order, and giving his deputy the christian and surname, the address, and occupation of the person who originally obtained the order, so that the deputy may be enabled to give those particulars when he presents the order at the office for payment. Persons residing in London should instruct their correspondents who may obtain money orders, to make them payable at the most convenient of the above offices, as money orders granted, bearing London only, can be paid only at the principal office, St. Martin's-le-Grand.

LONDON DISTRICT POST.

The following table shows the times at which letters are despatched from and to London, and to and from places within the limits of the London district post.

Letters must be posted at receiving-houses in London,

Morning, before	8	for the	10	o'clock dispatch
..	10	..	12	..
..	12	..	1	.
..	1	..	2	..
..	2	..	3	..
..	3	..	4	..
..	4	..	5	..
..	5	..	6	..
..	6	..	8	..
..	8	..	8	next morning.

At the principal office, St. Martin's-le-Grand, letters must be posted,

Morning, before	9	for the	10	o'clock dispatch,
..	11	..	12	..
quarter before	1	..	1	..
..	2	..	2	..
..	3	..	3	..
..	4	..	4	..
..	5	..	5	..
..	6	..	6	..
before	7	..	8	..
..	8	..	8	next morning.

The deliveries in the country commence immediately upon the arrival of the dispatch from London, except the 8 o'clock night dispatch, which is not delivered till the next morning. The time of arrival of the day-dispatches may be calculated by the distance from London, allowing the post to travel at about the rate of eight miles an hour. Letters for places on the main roads are delivered generally sooner than those for places a distance from them; the deliveries occupy, according to distance from London, from one hour and a half to three hours after the time of dispatch from London. Receiving-houses where the mail cart stops are also called sorting-offices: where there are other receiving-houses in the same place or town, letters are generally dispatched from the latter from a quarter to three quarters of an hour earlier than from the sorting-offices. There are no receiving-houses at those places having no time stated for dispatch to London.

By a recent Treasury warrant the following regulations respecting Foreign Postage were promulgated:—

To all the usual trading-ports of the Cape of Good Hope and Eastward of that Cape, including the Red Sea and Persian Gulf, and between any of the ports enumerated, except between Australia and New Zealand, a uniform rate of 1s. will be charged, on letters not exceeding half-an-ounce in weight [the weight allowed in the succeeding paragraphs].

The rate to the Eastern coast of the Isthmus of Panama is to be 1s.; to the Western coast of Panama or the Western coast of America, 2s.

To Heligoland (except on the letters of soldiers and sailors, which are already lower), 6d.

British and Colonial papers between British Colonies, without passing through the United Kingdom to be free; except that 1d. may be allowed as a gratuity to the master of the vessel conveying them.

Newspapers, British, Foreign, or Colonial, passing between British or Colonial and Foreign Ports, and through the British post, to pay 2d.; if not through the British post, 1d.

Such papers passing between places in British North American or British West Indian Colonies, to pay a uniform inland rate of ½d.

Each supplement to be charged as a separate newspaper, whether inclosed separately or not.

Belgian newspapers may be sent from Belgium through the United Kingdom to any Colonies, at a uniform rate of British postage of 1d. each.

No newspaper, price-current, or commercial list, shall be conveyed by the post under the regulations of this warrant, unless the same shall be sent without a cover, or in a cover open at the sides, and unless there be no writing or mark upon it except the name and address of the person to whom sent.

The Postage rate to Hanover is altered to a uniform British rate of 6d.; prepayment of the whole postage of British and Foreign rates optional. Newspapers, 1d.

NEWSPAPERS.

As complaints are continually made that newspapers sent by post are frequently lost, it may not be amiss to state, that the following order on the subject is periodically issued, by the authorities, as a caution to letter-carriers and others:—"General Post-office.—The complaints on the subject of missing newspapers, stated to have been committed to the post, continue to be so numerous, that, although the Postmaster-General is satisfied that much of the irregularity complained of arises from causes beyond the control of the Post-office, his lordship thinks it expedient that every one engaged in the Post-office service should be made acquainted with the 32nd section of the 1st Vic., cap. 36, by which it is provided, "That every person employed in the Post-office, who shall steal, or shall wilfully detain or delay in course of conveyance or delivery, any printed votes or proceedings in Parliament, or any printed newspaper, or any other printed paper whatever sent by the post, shall be guilty of a misdemeanour, and, being convicted thereof, shall suffer such punishment, by fine or imprsonment, or by both, as to the court shall seem meet." And his lordship further desires it may be distinctly understood, that every individual acting, in any capacity, in the service of the Post-office, who shall be guilty of such an offence, will be prosecuted with the utmost rigour of the law.

NEW LINES OF STEAM VESSELS.

British enterprise has now established steam communication with the following countries:—To Russia, Sweden, and Denmark, by the Hull line; to St. Petersburg; to North Germany, by the Hull and London lines to Hamburgh; to Holland, Belgium, and France, by the General Steam Company's vessels; to the north and south of Spain and to Portugal, by the Peninsular Company's vessels; to Italy, by the new line from London to Leghorn; to Malta, the Levant, and Constantinople, by the new line from Liverpool; to Egypt, Arabia, Ceylon, India, Sincapore, and China, by the Oriental Steam Company's vessels; to British America and the United States, by the Cunard and Great Western lines from Liverpool; to the West Indies, Mexico, and the north coast of South America, by the West India line; to Peru and Chili by the West Coast line; to Brazil and the River Plate, by the line building in Liverpool. The only British colonies of any importance which have not now the advantage of steam communication with the mother country, are the Cape, the Mauritius, and Australian colonies.

PASSPORT OFFICES.

America (United States and Central America).—No passport required.

Austria.—Embassy, 7, Chandos-street, Cavendish-square, between 12 and 2.

Bavaria.—The Minister, 3, Hill-street, Berkeley-square, when personally known to him; or the Consul, 11, Bury-court, St. Mary Axe.

Belgium.—Legation, 9 A, Weymouth-street, Portland-place, between 11 and 3; delivered next day between 11 and 2, gratis; or the Consul's office, 3, Copthall-court, between 10 and 4—fee 5s.

Brazil.—Legation, 10, York-place, Portman-square, between 12 and 2, gratis.

Denmark.—Consul's office, 6, Warnford-court, between 10 and 4—fee 10s 6d.

France.—French passport-office, 6, Poland-street, Oxford-street, from 11 to 5; delivered next day between 1 and 3, on personal application, gratis; also at the Consul's office, 3, Copthall buildings, between 12 and 4—fee 10s.

Greece.—Consul's office, 25, Finsbury-circus, between 11 and 4—fee 2s. 6d.

Hanover.—Secretary to Embassy, 4, Hobart-place, Eaton-square, between 10 and 3; and at the Consul's office, 6, Circus, Minories, between 10 and 3, gratis.

Mexico.—Legation, 7, Sussex-place, Regent's-park, between 12 and 4; delivered following day.

Naples and Sicily.—Passport-office, 2, Old Cavendish-street, Mondays and Thursdays, between 10 and 12; delivered following day between 2 and 3, gratis; for persons *going by sea*, Consul's office, 15, Cambridge-street, Hyde Park-square, between 10 and 12—fee 10s.

Portugal.—Embassy, 57, Upper Seymour-street, Bryanstone-square, between 11 and 4, delivered following day; also at Consul's office, 15, St. Mary Axe.

Prussia.—Consul's office, 106, Fenchurch-street, between 10 and 6—fee 7s.

Russia.—Consul's office, 2, Winchester-buildings, between 10 and 4; delivered following day—fee 6s. 4d.

Spain.—Visas to Foreign Office. Passports to British subjects, at the Legation, between 11 and 3 gratis; passports to natives at the same time and place.

Sweden and Norway.—Embassy, 66, Mount-street, Berkeley-square, between 9 and 1; delivered following day—fee 5s.

Turkey.—Embassy, 1, Bryanstone-square, between 12 and 3 every day, except Friday and Sunday, gratis.

Tuscany.—Consul's Office, 15, Angel-court, Throgmorton-street, between 10 and 4, gratis.

OLD BAILEY SESSIONS, 1846.

Monday	January 5	Monday	June 15
„	February 2	„	July 6
„	February 23	„	August 17
„	March 30	„	September 21
„	May 11	„	November 26

RATE OF ALLOWANCE TO WITNESSES ON TRIALS,

FOR ATTENDANCE AND EXPENSES, PER DAY.

Attorneys and Engineers	£2 2 0	Tradesmen, Yeomen, & Farmers, from ..	10s. to 15s.
Gentlemen, Professional Men, and Bankers	1 1 0	Mechanics & Labourers from	5s. to 7s.6d
For Travelling	1s. per mile	The Attorney in the Cause ..	1s. 3d.

EXHIBITIONS AND OTHER PUBLIC PLACES OPEN GRATUITOUSLY.

THE TOWER OF LONDON.

THE BRITISH MUSEUM.—Monday, Wednesday, and Friday, and the whole of Easter and Whitsun weeks except Saturday, from 10 to 4; from May to September, 10 to 7; closed the first week in January, May, and September, and on Christmas Day, Good Friday, and Ash Wednesday. Children under eight years of age not admitted.

UNITED SERVICE MUSEUM, Middle Scotland Yard.—Daily, with orders from members.

NATIONAL GALLERY.—Monday, Tuesday, Wednesday, and Thursday, and the whole of Easter and Whitsun weeks except Saturday, from 10 till 5; closed for six weeks from the end of the second week in September, and on Christmas Day and Good Friday.

ST. PAUL'S.—Each week-day from 9 to 11, and from 3 to 4; and on Sunday during the time of divine service.

EAST INDIA HOUSE MUSEUM.—Saturday, from 11 to 3; all the year, except in September.

SOANE MUSEUM.—Thursday and Friday during April, May, and June, from 10 to 4. Tickets must be applied for previously, and will be sent by post

SOCIETY OF ARTS.—Any day except Wednesday, to strangers and mechanics.

HAMPTON COURT PALACE.—Every day from 10 till 4. Friday excepted.

KEW GARDENS.—Pleasure Grounds, Sunday and Thursday, from 12 till sunset, from Midsummer to Michaelmas; the Botanical Gardens and Arboretum every day, to strangers, from 1 to 3, at any season.

TEMPLE GARDENS.—Every evening from June 18 to August 31, from 6 in the evening till dusk; and from 8 in the morning till dusk throughout the year on order from a bencher.

DULWICH GALLERY.—Each week-day, except Friday, from 10 to 5 in summer, and from 11 to 3 in winter. Tickets to be had gratis of most of the respectable printsellers in London.

COLLEGE OF SURGEONS' MUSEUM.—Monday, Wednesday, and Friday, with orders from members.

RAILWAYS.

SECRETARIES AND PRINCIPAL OFFICES OF THE RAILWAYS OF GREAT BRITAIN AND IRELAND.

[Those with a * prefixed received Parliamentary sanction last Session.]

NAME OF RAILWAY.	PRINCIPAL OFFICE.	NAME OF SECRETARY.
* Aberdare	Aberdare	L. Lewis, Esq. V.
* Aberdeen ..	85, Union-street, Aberdeen	John Macdonald, Esq.
Arbroath and Forfar	Arbroath	James Moffat, Esq.
Ardrossan ..	Ardrossan ..	Henry Hatten and Acton Tindal, Esqrs.
Aylesbury ..	Aylesbury ..	Alex. J. Adie, Esq.
Ballochney	Glasgow ..	Theed Pearse, Jun., Esq.
* Bedford and London and Birmingham	Bedford ..	Hugh Harrison, Esq.
* Belfast and Ballymena	Belfast ..	Joseph Sanders, Esq.
Birmingham and Gloucester	Birmingham ..	Thomas Mac Nay, Esq.
* Bishop Auckland and Weardale	Darlington ..	Fred. Wm. James, Esq.
* Blackburn, Darwen, and Bolton	Blackburn ..	Peter Sinclair, Esq.
Blackburn and Preston	Blackburn	Frederick Ottley, Esq.
* Brighton and Chichester	4, Dean-street, Tooley-street, London	Boyman Boyman, Esq.
Brighton, Lewes, and Hastings	11, King William-street, London	J. B. Badham, Esq.
Bristol and Exeter	Broad-street, Bristol	D. Rankine, Esq,
* Caledonian ..	Princes-street, Edinburgh	
Chester and Birkenhead	Birkenhead	
Chester and Holyhead	62, Moorgate-street, London	George King, Esq.
* Cockermouth and Workington	Cockermouth ..	George Hy. Barnes, Esq.
* Cork and Bandon	Cork ..	John M'Donnell, Esq.
* Dublin and Belfast Junction and Navan Branch	Dublin ..	Miles Reck, Esq.
Dublin and Drogheda	Dublin ..	
Dublin and Kingstown	Dublin ..	Thos. F. Bergin, Esq.
* Dundalk and Enniskillen	Dublin ..	Hatfield Nicholson, Esq.
Dundee and Arbroath	Dundee ..	Messrs. Shiell and Small
Dundee and Newtyle	Dundee ..	Richard Baird, Esq.
* Dunstable	Euston Station, London	Thomas Long, Esq.
Durham and Sunderland	Sunderland	Michael Coxon, Esq.
Eastern Counties ..	Shoreditch, London	Archd. Bulkeley, Esq.
Eastern Union ..	Ipswich .	Jas. F. Saunders, Esq.
East Lancashire ..	Bury ..	Jas. Smithells, Esq.
Edinburgh and Glasgow	Glasgow ..	H. G. Wright, Esq.
Edinburgh, Leith, and Granton	Edinburgh ..	Allen Geo. Field, Esq.
* Ely and Huntingdon	Lynn, Norfolk ..	W. W. Williams, Esq.
* Exeter and Crediton	Exeter	Thos. Hartnoll, Esq.
Furness	Old Palace Yard, Westminster	Arthur Currey, Esq.
Glasgow, Paisley, and Greenock	Greenock ..	James Tasker, Esq.
Glasgow, Paisley, Kilmarnock and Ayr	Glasgow ..	J. Fairfull Smith, Esq.
Grand Junction	Liverpool	Henry Booth, Esq.
*Gravesend and Rochester Railway and Canal	15, New Broad-street, City	Frederick Collier, Esq.
Great North of England	Darlington ..	Major H. Parker
Great Southern and Western (Ireland)	Dublin	Wm. Taylor, Esq.
Great Western	Paddington Station	C. A. Saunders, Esq.
Hartlepool Dock and Railway	Hartlepool ..	George King, Esq.
* Huddersfield and Sheffield Junction	Huddersfield ..	T. K. Rowbotham, Esq.
* Huddersfield and Manchester Railway and Canal	Huddersfield ..	Edward Ledyard, Esq.
Hull and Selby ..	Hull ..	George Locking, Esq.
* Ipswich and Bury St. Edmund's	Ipswich ..	Jas. F. Saunders, Esq.
* Kendal and Windermere	Kendal ..	Thos. Hudson, Esq.
Lancaster and Preston Junction	Lancaster ..	S. E. Bolden, Esq.
Lancaster and Carlisle	Lancaster	S. E. Bolden, Esq.
Leeds and Bradford	North Midland Station, Leeds	W. E. Greenland, Esq.
* Leeds and Thirsk ..	Leeds ..	Jas. Fenton, Esq.
* Leeds, Dewsbury, and Manchester	Leeds ..	W. Eagle Bott, Esq.
Leicester and Swannington	Leicester	G. W. Gill, Esq.
* Liverpool and Bury	Liverpool	John Speir Heron, Esq.
Llanelly	9, Old Jewry Chambers London	R. Glascodine, Esq.
London and Birmingham	Euston Station	Richard Creed, Esq.
London and Croydon	London Bridge	R. S. Young, Esq.
London and South Western	Nine Elms, London	Alfred Morgan, Esq.
London and Brighton	London-bridge	T. J. Buckstone, Esq.
London and Greenwich	10, Coleman-street, London	H. Adron, Esq.
London and Blackwall	London-bridge	J. F. Kennell, Esq.
* Londonderry and Coleraine	Moorgate-street Chambers, London	F. H. Hemming, Esq.
* Londonderry and Enniskillen	Ditto	Ditto
* Lynn and Dereham	Lynn, Norfolk ..	W. W. Williams Esq.
* Lynn and Ely	Ditto	Ditto
Manchester, Bolton, and Bury Canal Navigation and Railway	Salford ..	
Manchester and Birmingham	Manchester ..	John Latham, Esq.
Manchester and Leeds	Manchester ..	P. L. Campbell, Esq.
* Middlesbro' and Redcar	Darlington ..	Thos. Mac Nay, Esq.
Midland	Derby ..	John Fox Bell, Esq.
Monkland and Kirkintilloch	Glasgow	Alex. J. Adie, Esq.
Newcastle-upon-Tyne and Carlisle	Forth, Newcastle-upon-Tyne	John Adamson, Esq.
Newcastle upon Tyne and North Shields	Newcastle-upon-Tyne	Wm. Swan, Esq.
Newcastle and Darlington Junction	York ..	John Close, Esq.
Norfolk	Guildhall Buildings, London	Richard Till, Esq.
North British	Edinburgh ..	C. F. Davidson, Esq.
North Union ..	Preston ..	James Chapman, Esq.
North Wales Mineral ..	Chester ..	R. Roy, Esq.
Northern and Eastern	Shoreditch, London	Wm. Bourne, Esq.
* Nottingham, Erewash Valley, Ambergate, and Manchester	Nottingham ..	John Gough, Esq.
Pontop and South Shields	Guildhall Buildings, London	Richard Till, Esq.
Preston and Wyre Railway Harbour and Dock	Fleetwood ..	H. B. Jones, Esq.
* Richmond	3, Moorgate-street, London	Richard Meade, Esq.
* Scottish and Midland Junction	Perth ..	Robert Bow. Ker, Esq.
* Scottish Central	Perth ..	Robert D. Ker, Esq.
Sheffield, Ashton-under-Lyne, and Manchester	Manchester ..	John Platford, Esq.
* Sheffield and Lincolnshire Junction	Sheffield ..	J. H. Humfrey, Esq F.R.A.S.
* Shrewsbury, Oswestry, and Chester Junction	Chester ..	Robert Roy, Esq.
Slamannan	Glasgow ..	Alex. J. Adie, Esq.
South Devon ..	Exeter ..	Wm. Carr, Esq.
South Eastern (London and Dover)	London-bridge	Capt. W. O'Brien, R.E.
* South Wales ..	449, West Strand, London	N. Armstrong, Esq.
* Southampton and Dorchester	Ringwood, Hants	F. A. Griffiths, Esq.
Stockton and Darlington	Darlington ..	Samuel Barnard, Esq.
St. Helens Canal and Railway	St. Helens ..	Arthur Sinclair, Esq.
Taff Vale	Cardiff	A. F. Moreom, Esq.
Taw Vale Extension and Dock	5, Guildhall Chambers, London	G. H. Harris, Esq., (pro temp.)
Ulster	Belfast	J. G. Smith, Esq.
* Waterford and Limerick	Waterford	W. S. Saunders, Esq.
* Wear Valley	Darlington	Thomas Mac Nay, Esq.
West London ..	11, Abchurch-lane, London	John Thompson, Esq.
Whitehaven Junction	Whitehaven	Jas. Knipe, Esq,
Wilsontown, Morningside, and Coltness	Glasgow	Jas. Mitchell, Esq.
Wishaw and Coltness	St. Rollox, Glasgow	C. A. King, Esq.
York and North Midland	York	Wm. Gray, Junr., Esq.

TABLE FOR COMPUTING BROKERS' COMMISSION.

No. of Share	At 6d per Share.	At 1s. per Share.	At 1s. 3d. per Share	At 1s. 6d. per Share.	At 2s per Share	At 2s. 6d. per Share.	At 5s. per Share.	At 10s. per Share.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1	0 0 6	0 1 0	0 1 3	0 1 6	0 2 0	0 2 6	0 5 0	0 10 0
2	0 1 0	0 2 0	0 2 6	0 3 0	0 4 0	0 5 0	0 10 0	1 0 0
3	0 1 6	0 3 0	0 3 9	0 4 6	0 6 0	0 7 6	0 15 0	1 10 0
4	0 2 0	0 4 0	0 5 0	0 6 0	0 8 0	0 10 0	1 0 0	2 0 0
5	0 2 6	0 5 0	0 6 3	0 7 6	0 10 0	0 12 6	1 5 0	2 10 0
6	0 3 0	0 6 0	0 7 6	0 9 0	0 12 0	0 15 0	1 10 0	3 0 0
7	0 3 6	0 7 0	0 8 9	0 10 6	0 14 0	0 17 6	1 15 0	3 10 0
8	0 4 0	0 8 0	0 10 0	0 12 0	0 16 0	1 0 0	2 0 0	4 0 0
9	0 4 6	0 9 0	0 11 3	0 13 6	0 18 0	1 2 6	2 5 0	4 10 0
10	0 5 0	0 10 0	0 12 6	0 15 0	1 0 0	1 5 0	2 10 0	5 0 0
11	0 5 6	0 11 0	0 13 9	0 16 6	1 2 0	1 7 6	2 15 0	5 10 0
12	0 6 0	0 12 0	0 15 0	0 18 0	1 4 0	1 10 0	3 0 0	6 0 0
13	0 6 6	0 13 0	0 16 3	0 19 6	1 6 0	1 12 6	3 5 0	6 10 0
14	0 7 0	0 14 0	0 17 6	1 1 0	1 8 0	1 15 0	3 10 0	7 0 0
15	0 7 6	0 15 0	0 18 9	1 2 6	1 10 0	1 17 6	3 15 0	7 10 0
16	0 8 0	0 16 0	1 0 0	1 4 0	1 12 0	2 0 0	4 0 0	8 0 0
17	0 8 6	0 17 0	1 1 3	1 5 6	1 14 0	2 2 6	4 5 0	8 10 0
18	0 9 0	0 18 0	1 2 6	1 7 0	1 16 0	2 5 0	4 10 0	9 0 0
19	0 9 6	0 19 0	1 3 9	1 8 6	1 18 0	2 7 6	4 15 0	9 10 0
20	0 10 0	1 0 0	1 5 0	1 10 0	2 0 0	2 10 0	5 0 0	10 0 0
21	0 10 6	1 1 0	1 6 3	1 11 6	2 2 0	2 12 6	5 5 0	10 10 0
22	0 11 0	1 2 0	1 7 6	1 13 0	2 4 0	2 15 0	5 10 0	11 0 0
23	0 11 6	1 3 0	1 8 9	1 14 6	2 6 0	2 17 6	5 15 0	11 10 0
24	0 12 0	1 4 0	1 10 0	1 16 0	2 8 0	3 0 0	6 0 0	12 0 0
25	0 12 6	1 5 0	1 11 3	1 17 6	2 10 0	3 2 6	6 5 0	12 10 0
26	0 13 0	1 6 0	1 12 6	1 19 0	2 12 0	3 5 0	6 10 0	13 0 0
27	0 13 6	1 7 0	1 13 9	2 0 6	2 14 0	3 7 6	6 15 0	13 10 0
28	0 14 0	1 8 0	1 15 0	2 2 0	2 16 0	3 10 0	7 0 0	14 0 0
29	0 14 6	1 9 0	1 16 3	2 3 6	2 18 0	3 12 6	7 5 0	14 10 0
30	0 15 0	1 10 0	1 17 6	2 5 0	3 0 0	3 15 0	7 10 0	15 0 0
31	0 15 6	1 11 0	1 18 9	2 6 6	3 2 0	3 17 6	7 15 0	15 10 0
32	0 16 0	1 12 0	2 0 0	2 8 0	3 4 0	4 0 0	8 0 0	16 0 0
33	0 16 6	1 13 0	2 1 3	2 9 6	3 6 0	4 2 6	8 5 0	16 10 0
34	0 17 0	1 14 0	2 2 6	2 11 0	3 8 0	4 5 0	8 10 0	17 0 0
35	0 17 6	1 15 0	2 3 9	2 12 6	3 10 0	4 7 6	8 15 0	17 10 0
36	0 18 0	1 16 0	2 5 0	2 14 0	3 12 0	4 10 0	9 0 0	18 0 0
37	0 18 6	1 17 0	2 6 3	2 15 6	3 14 0	4 12 6	9 5 0	18 10 0
38	0 19 0	1 18 0	2 7 6	2 17 0	3 16 0	4 15 0	9 10 0	19 0 0
39	0 19 6	1 19 0	2 8 9	2 18 6	3 18 0	4 17 6	9 15 0	19 10 0
40	1 0 0	2 0 0	2 10 0	3 0 0	4 0 0	5 0 0	10 0 0	20 0 0
41	1 0 6	2 1 0	2 11 3	3 1 6	4 2 0	5 2 6	10 5 0	20 10 0
42	1 1 0	2 2 0	2 12 6	3 3 0	4 4 0	5 5 0	10 10 0	21 0 0
43	1 1 6	2 3 0	2 13 9	3 4 6	4 6 0	5 7 6	10 15 0	21 10 0
44	1 2 0	2 4 0	2 15 0	3 6 0	4 8 0	5 10 0	11 0 0	22 0 0
45	1 2 6	2 5 0	2 16 3	3 7 6	4 10 0	5 12 6	11 5 0	22 10 0
46	1 3 0	2 6 0	2 17 6	3 9 0	4 12 0	5 15 0	11 10 0	23 0 0
47	1 3 6	2 7 0	2 18 9	3 10 6	4 14 0	5 17 6	11 15 0	23 10 0
48	1 4 0	2 8 0	3 0 0	3 12 0	4 16 0	6 0 0	12 0 0	24 0 0
49	1 4 6	2 9 0	3 1 3	3 13 6	4 18 0	6 2 6	12 5 0	24 10 0
50	1 5 0	2 10 0	3 2 6	3 15 0	5 0 0	6 5 0	12 10 0	25 0 0
51	1 5 6	2 11 0	3 3 9	3 16 6	5 2 0	6 7 6	12 15 0	25 10 0
52	1 6 0	2 12 0	3 5 0	3 18 0	5 4 0	6 10 0	13 0 0	26 0 0
53	1 6 6	2 13 0	3 6 3	3 19 6	5 6 0	6 12 6	13 5 0	26 10 0
54	1 7 0	2 14 0	3 7 6	4 1 0	5 8 0	6 15 0	13 10 0	27 0 0
55	1 7 6	2 15 0	3 8 9	4 2 6	5 10 0	6 17 6	13 15 0	27 10 0
56	1 8 0	2 16 0	3 10 0	4 4 0	5 12 0	7 0 0	14 0 0	28 0 0
57	1 8 6	2 17 0	3 11 3	4 5 6	5 14 0	7 2 6	14 5 0	28 10 0
58	1 9 0	2 18 0	3 12 6	4 7 0	5 16 0	7 5 0	14 10 0	29 0 0
59	1 9 6	2 19 0	3 13 9	4 8 6	5 18 0	7 7 6	14 15 0	29 10 0
60	1 10 0	3 0 0	3 15 0	4 10 0	6 0 0	7 10 0	15 0 0	30 0 0
61	1 10 6	3 1 0	3 16 3	4 11 6	6 2 0	7 12 6	15 5 0	30 10 0
62	1 11 0	3 2 0	3 17 6	4 13 0	6 4 0	7 15 0	15 10 0	31 0 0
63	1 11 6	3 3 0	3 18 9	4 14 6	6 6 0	7 17 6	15 15 0	31 10 0
64	1 12 0	3 4 0	4 0 0	4 16 0	6 8 0	8 0 0	16 0 0	32 0 0
65	1 12 6	3 5 0	4 1 3	4 17 6	6 10 0	8 2 6	16 5 0	32 10 0
66	1 13 0	3 6 0	4 2 6	4 19 0	6 12 0	8 5 0	16 10 0	33 0 0
67	1 13 6	3 7 0	4 3 9	5 0 6	6 14 0	8 7 6	16 15 0	33 10 0
68	1 14 0	3 8 0	4 5 0	5 2 0	6 16 0	8 10 0	17 0 0	34 0 0
69	1 14 6	3 9 0	4 6 3	5 3 6	6 18 0	8 12 6	17 5 0	34 10 0
70	1 15 0	3 10 0	4 7 6	5 5 0	7 0 0	8 15 0	17 10 0	35 0 0
71	1 15 6	3 11 0	4 8 9	5 6 6	7 2 0	8 17 6	17 15 0	35 10 0
72	1 16 0	3 12 0	4 10 0	5 8 0	7 4 0	9 0 0	18 0 0	36 0 0
73	1 16 6	3 13 0	4 11 3	5 9 6	7 6 0	9 2 6	18 5 0	36 10 0
74	1 17 0	3 14 0	4 12 6	5 11 0	7 8 0	9 5 0	18 10 0	37 0 0
75	1 17 6	3 15 0	4 13 9	5 12 6	7 10 0	9 7 6	18 15 0	37 10 0
76	1 18 0	3 16 0	4 15 0	5 14 0	7 12 0	9 10 0	19 0 0	38 0 0
77	1 18 6	3 17 0	4 16 3	5 15 6	7 14 0	9 12 6	19 5 0	38 10 0
78	1 19 0	3 18 0	4 17 6	5 17 0	7 16 0	9 15 0	19 10 0	39 0 0
79	1 19 6	3 19 0	4 18 9	5 18 6	7 18 0	9 17 6	19 15 0	39 10 0
80	2 0 0	4 0 0	5 0 0	6 0 0	8 0 0	10 0 0	20 0 0	40 0 0
81	2 0 6	4 1 0	5 1 3	6 1 6	8 2 0	10 2 6	20 5 0	40 10 0
82	2 1 0	4 2 0	5 2 6	6 3 0	8 4 0	10 5 0	20 10 0	41 0 0
83	2 1 6	4 3 0	5 3 9	6 4 6	8 6 0	10 7 6	20 15 0	41 10 0
84	2 2 0	4 4 0	5 5 0	6 6 0	8 8 0	10 10 0	21 0 0	42 0 0
85	2 2 6	4 5 0	5 6 3	6 7 6	8 10 0	10 12 6	21 5 0	42 10 0
86	2 3 0	4 6 0	5 7 6	6 9 0	8 12 0	10 15 0	21 10 0	43 0 0
87	2 3 6	4 7 0	5 8 9	6 10 6	8 14 0	10 17 6	21 15 0	43 10 0
88	2 4 0	4 8 0	5 10 0	6 12 0	8 16 0	11 0 0	22 0 0	44 0 0
89	2 4 6	4 9 0	5 11 3	6 13 6	8 18 0	11 2 6	22 5 0	44 10 0
90	2 5 0	4 10 0	5 12 6	6 15 0	9 0 0	11 5 0	22 10 0	45 0 0
91	2 5 6	4 11 0	5 13 9	6 16 6	9 2 0	11 7 6	22 15 0	45 10 0
92	2 6 0	4 12 0	5 15 0	6 18 0	9 4 0	11 10 0	23 0 0	46 0 0
93	2 6 6	4 13 0	5 16 3	6 19 6	9 6 0	11 12 6	23 5 0	46 10 0
94	2 7 0	4 14 0	5 17 6	7 1 0	9 8 0	11 15 0	23 10 0	47 0 0
95	2 7 6	4 15 0	5 18 9	7 2 6	9 10 0	11 17 6	23 15 0	47 10 0
96	2 8 0	4 16 0	6 0 0	7 4 0	9 12 0	12 0 0	24 0 0	48 0 0
97	2 8 6	4 17 0	6 1 3	7 5 6	9 14 0	12 2 6	24 5 0	48 10 0
98	2 9 0	4 18 0	6 2 6	7 7 0	9 16 0	12 5 0	24 10 0	49 0 0
99	2 9 6	4 19 0	6 3 9	7 8 6	9 18 0	12 7 6	24 15 0	49 10 0
100	2 10 0	5 0 0	6 5 0	7 10 0	10 0 0	12 10 0	25 0 0	50 0 0

HACKNEY COACH AND CAB FARES.

FARE FROM	Birmingh. Euston-sq		Brighton, Tooley-st.		E. Count. Shoreditch		Gt. West Paddingt		Southamp. Nine Elms.	
	Cb	Coa.	Cab	Coa.	Cab	Coa.	Cab	Coa.	Cab	Coa.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Adelphi Terrace	1 4 2	0 1	8 2	6 2	0 3	0 2	4 3	6 1	8 2	6
Aldersgate-street ..	1 8 2	6 1	0 1	6 1	0 1	6 3	0 4	6 2	4 3	6
Aldgate	2 0 3	0 0	8 1	4 1	0 1	6 3	4 5	0 2	4 3	6
Angel, Islington ..	1 0 1	6 1	8 2	6 1	4 2	0 2	8 4	0 3	0 4	6
Baker-street	1 0 1	6 2	8 4	0 3	0 4	6 1	0 1	6 2	4 3	6
Bayswater, Porchester Terrace	2 0 3	0 3	4 5	0 3	4 5	0 0	8 1	0 2	8 4	0
Bedford-row	1 0 1	6 1	8 2	6 1	8 2	6 2	4 3	6 2	4 3	6
Bedford-square	0 8 1	0 2	0 3	0 2	0 3	0 2	0 3	0 2	0 3	0
Belle Sauvage .	1 8 2	6 1	0 1	6 1	4 2	0 2	8 4	0 2	4 3	6
Birmingham Railway Station	— —		2 4 3	6 2	4 3	6 1	8 2	6 2	8 4	0
Bishopsgate-street ..	2 4 3	6 0	8 1	0 0	8 1	0 3	4 5	0 2	4 3	6
Bishopsgate-street (Union-st.	2 0 3	0 1	0 1	6 0	8 1	0 3	4 5	0 2	8 4	0
Bloomsbury-square ..	0 8 1	0 1	8 2	6 1	8 2	6 2	0 3	0 2	0 3	0
Bond-street, Oxford-street	1 4 2	0 2	4 3	6 2	8 4	0 1	4 2	0 2	4 3	6
Bridge-street, Blackfriars	1 8 2	6 1	0 1	0 1	4 2	0 3	0 4	0 1	8 2	6
Brighton Railway Station	2 4 3	6 —	—	— 1	4 1	8 3	4 5	0 2	0 3	0
Brunswick-square ..	0 8 1	0 2	0 3	0 2	0 3	0 2	0 3	0 —	—	
Bryanstone-square ..	1 4 2	0 3	0 4	6 3	0 4	6 1	0 1	6 2	4 3	6
Camberwell	3 0 4	6 2	0 3	0 2	4 3	6 3	8 5	6 1	4 2	0
Camden Town ..	0 8 1	0 2	8 4	0 2	4 3	6 2	0 3	0 3	0 4	6
Cavendish-square ..	1 0 1	6 2	4 3	6 2	4 3	6 1	4 2	0 2	4 3	6
Charing Cross	1 4 2	0 1	8 2	6 2	0 3	0 2	0 3	0 1	6 2	6
Charles-street, Oxford-street	1 0 1	6 2	0 3	0 2	0 3	0 1	8 2	6 2	0 3	0
Cheapside	1 8 2	6 0	8 1	0 1	0 1	6 3	0 4	6 2	4 3	6
Clerkenwell Green ..	1 4 2	0 1	4 2	8 1	4 2	0 2	8 4	0 2	8 4	0
Cornhill	2 0 3	0 0	8 1	0 0	8 1	0 3	4 5	0 2	4 3	6
Covent Garden	1 4 2	0 1	8 2	6 2	0 3	0 2	0 3	0 2	0 3	0
Drury-lane	1 0 1	6 1	4 2	0 1	8 2	6 2	0 3	0 2	0 3	0
East Counties Rail. Station	2 0 3	0 1	0 1	6 —	—		3 8 5	6 2	8 4	0
Eaton-street Coach Stand	2 4 3	6 2	0 3	0 3	0 4	6 2	0 3	0 1	4 2	0
Elephant and Castle Tavern	2 4 3	6 1	0 1	6 1	8 2	6 3	4 5	0 1	4 2	0
Foundling Hospital Gate ..	1 0 1	6 1	8 2	6 2	0 3	0 2	4 3	6 2	8 4	0
General Post-office ..	1 8 2	6 1	0 1	6 1	0 1	6 2	8 4	0 2	4 3	6
Gloucester-place ..	1 0 1	6 3	0 4	6 3	0 4	6 1	0 1	6 2	4 3	6
Gray's-inn-road ..	1 4 2	0 1	4 2	0 1	4 2	0 2	4 3	6 2	4 3	6
Gracechurch-street, (S. Eagle)	2 0 3	0 0	8 1	0 0	8 1	0 3	4 5	0 2	4 3	6
Great Western Railway ..	1 8 2	6 3	4 5	0 3	8 5	6 —	—	— 3	0 4	6
Grosvenor-square ..	1 4 2	0 2	8 4	0 2	8 4	0 1	4 2	0 2	0 3	0
Guildford-street ..	0 8 1	0 1	8 2	6 1	8 2	6 2	0 3	0 2	4 3	6
Hanover-square ..	1 4 2	0 2	4 3	6 2	4 3	6 1	4 2	0 —	—	
Harley-street	0 8 1	0 2	8 4	0 2	8 4	0 1	0 1	6 2	4 3	6
Hatton Garden, Holborn	1 4 2	0 1	4 2	0 1	4 2	0 2	4 3	6 2	4 3	6
Haymarket	1 4 2	0 2	0 3	0 2	4 3	6 2	0 3	0 1	8 2	6
High-street, Marylebone	1 0 1	6 3	0 4	6 2	8 4	0 1	0 1	6 2	8 4	0
Horse Guards	1 4 2	0 1	8 2	6 2	4 3	6 2	4 3	6 1	4 2	0
Hyde Park Corner ..	2 0 3	0 2	8 4	0 3	0 4	6 1	8 2	6 1	8 2	6
Islington Green	1 4 2	0 1	8 2	6 1	4 2	0 2	8 4	0 3	4 5	0
Kennington Cross ..	2 8 4	0 1	4 2	0 2	0 3	0 3	4 5	0 0	8 1	0
Kennington, Horns Tavern	2 8 4	0 1	4 2	0 2	4 3	6 3	4 5	0 1	0 1	6
Kensington G., Hf. Way H.	2 4 3	6 3	0 4	6 3	4 5	0 2	4 3	6 2	0 3	0
Kensington Gravel Pits	2 4 3	6 4	0 6	0 3	8 5	6 1	0 1	6 3	0 4	6
Kent-road, Bricklayers Arms	3 0 4	6 1	0 1	6 1	8 2	6 3	8 5	6 1	8 2	6
Lambeth, Three Stags ..	2 4 3	6 1	4 2	0 2	0 3	0 3	0 4	6 1	0 1	6
Lambeth, Marsh Gate	2 0 3	0 1	0 1	6 2	0 3	0 2	8 4	0 1	4 2	0
Leicester-square ..	1 4 2	0 2	0 3	0 2	4 3	6 2	0 3	0 1	8 2	6
Lincoln's-Inn-Fields ..	1 0 1	6 1	4 2	0 1	8 2	6 2	4 3	6 2	0 3	0
London Bridge, K. William-st	2 0 3	0 0	8 1	0 0	8 1	0 3	4 5	0 2	0 3	0
Long Acre	1 0 1	6 1	8 2	6 2	0 3	0 2	0 3	0 1	8 2	6
Manchester-square ..	1 4 2	0 2	8 4	0 2	8 4	0 1	0 1	6 2	4 3	6
Mile End Gate	2 8 4	0 1	4 2	0 1	4 2	0 4	4 6	6 3	0 4	6
Newgate-street ..	1 8 2	6 1	0 1	6 1	0 1	6 2	8 4	0 2	4 3	6
Obelisk, St. George's Fields	2 0 3	0 1	0 1	6 1	8 2	6 3	0 4	6 1	4 2	0
Old Bailey	1 8 2	6 1	0 1	6 1	4 2	0 2	8 4	0 2	4 3	6
Oxford-street (Charles-street)	1 0 1	6 2	0 3	0 2	0 3	0 1	8 2	6 2	0 3	0
Palace Yard	1 8 2	6 1	8 2	6 2	4 3	6 2	4 3	6 1	4 2	0
Pall Mall	1 4 2	0 2	0 3	0 2	4 3	6 2	0 3	0 2	0 3	0
Pentonville	0 8 1	0 1	8 2	6 1	4 2	0 2	4 3	6 3	0 4	6
Piccadilly, Hatchett's Hotel	1 8 2	6 2	4 3	6 2	8 4	0 1	8 2	6 2	0 3	0
Portland-place ..	0 8 1	0 2	8 4	0 2	8 4	0 1	4 2	0 2	4 3	6
Portman-square	1 4 2	0 2	8 4	0 2	8 4	0 1	0 1	6 2	4 3	6
Queen-square, Bloomsbury	1 0 1	6 1	8 2	6 2	0 3	0 2	4 3	6 2	4 3	6
——— Westminster	2 0 3	0 2	0 3	0 2	8 4	0 2	4 3	6 1	8 2	6
Queen's Elm	2 8 4	0 3	4 5	0 3	8 5	6 2	4 3	6 2	4 3	6
Ratcliff Highway ..	2 8 4	0 1	4 2	0 1	4 2	0 4	0 6	0 3	8 5	6
Regent Circus, Oxford-street	1 0 1	6 2	4 3	6 2	4 3	6 1	4 2	0 2	4 3	6
Regent Circus, Piccadilly	1 4 2	0 2	0 3	0 2	4 3	6 1	8 2	6 2	0 3	0
Red Lion-street, Holborn	1 0 1	6 1	4 2	0 1	8 2	6 2	4 3	6 2	4 3	6
Russell-square	0 8 1	0 2	0 3	0 2	0 3	0 2	0 3	0 2	4 3	6
St. Luke's Hospital ..	1 8 2	6 1	4 2	0 1	0 1	6 3	0 4	6 2	8 4	0
St. Paul's Churchyard ..	1 8 2	6 1	0 1	6 1	4 1	8 2	8 4	0 2	4 3	6
Shoreditch Church ..	2 0 3	0 1	4 2	0 0	8 1	0 3	4 5	0 3	0 4	6
Sloane-street, Knightsbridge	2 4 3	6 3	0 4	6 3	0 4	6 1	8 2	6 2	0 3	0
Smithfield	1 4 2	0 1	0 1	6 1	0 1	6 2	8 4	0 2	4 3	0
Soho-square	1 0 1	6 2	0 3	0 2	0 3	0 1	8 2	6 2	0 3	0
Southampton Railway ..	2 8 4	0 2	0 3	0 2	8 4	0 3	0 4	6 —	—	
Strand, Agar-street ..	1 4 2	0 1	8 2	6 2	0 3	0 2	0 3	0 1	8 2	6
——— Surrey-street ..	1 4 2	0 1	4 2	0 1	8 2	6 2	0 3	0 2	0 3	0
Surrey Chapel, Blfrs.-road	2 0 3	0 0	8 1	0 1	8 2	6 3	0 4	6 1	8 2	6
Temple Bar	1 4 2	0 1	4 2	0 1	8 2	6 2	4 3	6 2	0 3	0
Tottenham Ct.-road, New-road	0 8 1	0 2	4 3	6 2	4 3	6 1	4 2	0 2	8 4	0
——— Oxford-street	1 0 1	6 2	0 3	0 2	0 3	0 1	8 2	6 3	0 2	0
Tower, the	2 4 3	6 1	0 1	6 1	0 1	6 3	4 5	0 2	8 4	0
Walworth	2 4 3	6 1	4 2	0 2	0 3	0 3	4 5	0 1	8 2	6
Waterloo-road Coach Stand	1 8 2	6 1	4 2	0 2	0 3	0 2	8 4	0 1	8 2	6
Welbeck-street	1 0 1	6 2	8 4	0 2	8 4	0 1	4 2	0 2	4 3	6
Westminster Abbey ..	1 8 2	6 1	8 2	6 2	4 3	6 2	4 3	6 1	4 2	0
Whitechapel Coach Stand	2 4 3	6 1	0 1	6 0	8 1	0 3	4 5	0 2	8 4	0
Wimpole-street	1 0 1	6 2	4 3	6 2	8 4	0 1	0 1	6 2	4 3	6

NEW ACTS OF PARLIAMENT AND PARLIAMENTARY RETURNS.

ABSTRACT OF THE WILLS ACT.

1 Victoria, c. 26.

Operation of the Act.—The Act does not extend to Scotland; neither does it affect the wills of soldiers or sailors on actual service, nor wills made before the commencement of 1838. But all wills, with the exception of those of soldiers or sailors, made after the commencement of 1838, come under the provisions of the Act.

What kind of Property may be bequeathed by Will.—It is lawful for every person to devise, bequeath, or dispose of, by his will executed in the manner directed by the act, all real estate, and all personal estate which he shall be entitled to either at law or in equity, at the time of his death.

All property may thus be bequeathed by will. "*Real Estate*" extends to manors, advowsons, messuages, lands, tithes, rents, and hereditaments, whether freehold, customary freehold, tenantright, customary or copyhold, or of any other tenure, and whether corporeal, incorporeal, or personal, and to all future and contingent interests therein. *Personal* estate extends to leasehold estates, and other chattels real, and also to moneys, shares of government and other funds, securities for money (not being real estate) debts, rights, credits, goods, &c.

How a Will should be made.—A will can only be made in WRITING: and it must be signed at the foot and end by the testator himself; or, if he is unable to do it, by some person for him, in his presence, and by his direction; and his testator must either make or acknowledge his signature in the presence of two or more persons, who are to be present at the same time, and who are to sign their names as attesting witnesses in the presence of the testator. No particular form of attestation is necessary.

The above mode must be observed by all persons, male, or female, in making their wills. If any person is drawing up his will, or having it drawn up for him, without legal assistance, the best mode of expression will be the simplest and plainest that can be used. Care must be taken not to bequeath legacies to attesting witnesses, or even to the wife or husband of an attesting witness, as all legacies so bequeathed are void in law. The object of this enactment seems to be to prevent any will from being disputed or nullified on account of any alleged undue interest on the part of an attesting witness. If, therefore, a testator wishes to give anything to an attesting witness, he must do it some other way than by a legacy. But creditors and executors can be attesting witnesses.

Who cannot make a Valid Will.—Persons under twenty-one years of age cannot make a valid will. Neither can married women in the lifetime of their husbands, except where they have property settled on them with a power of devising, &c.

What of itself Revokes a Will.—Any man or woman, having made a will, and marrying afterwards, the act of marriage revokes the will, "unless made in exercise of a power of appointment, when the estate thereby appointed would not in default pass to his or her heir, customary heir, executor, or administrator, or the person entitled as his or her next of kin, under the statute of distributions."

How a Will may be Revoked or Altered.—A will can only be revoked by being destroyed, or by the execution of a new will. Alterations must be made in the same way as a will.

Persons making any alterations in their wills must therefore be careful that the alterations are witnessed and signed in the same way as the wills

How a Will is to be hereafter Construed.—Wills are to be constructed as if made immediately before the death of the testator, unless a contrary intention appears from the terms of a will itself.

A residuary devise shall include the estates bequeathed by lapsed and void devises, unless a contrary intention shall appear.

A general devise of the testator's land shall include copyhold and leasehold, as well as freehold lands, unless a contrary intention shall appear.

A general gift shall include estates over which the testator has a general power of appointment, unless a contrary intention shall appear.

A devise without any words of limitation shall be construed to pass the fee, unless a contrary intention shall appear.

The words "die without issue," or "die without leaving issue," shall be construed to mean die without issue living at the death of the person, and not an indefinite failure of his issue, unless a contrary intention shall appear by the will, by reason of such person having a prior estate tail, or of a preceding gift, being, without any implication arising from such words, a limitation of an estate tail to such person or issue, or otherwise; but this Act shall not extend to cases where such words import if no issue described in a preceding gift shall be born, or if there shall be no issue who shall live to attain the age or otherwise answer the description required for obtaining a vested estate by a preceding gift to such issue.

The preceding abstract gives the main points of this important Act, which tends to simplify the law of wills, and prevent the litigation so often arising from the disposal of property by bequest.

NEW ACT FOR THE GRANTING OF LEASES.

"AN act to facilitate the Granting of certain Leases," 8 and 9 Victoria, c. 124, contains eight short provisions, with two schedules. The object of this new law seems to be to shorten leases for lands and tenements. A very short form, indeed, may be used, and it is provided, that in future leases, unless specially excepted, shall be deemed to include all outhouses, buildings, &c., belonging or otherwise appertaining. The remuneration for preparing and executing so short a deed is not to be paid by the length (shortness), but the taxing-master is to consider the skill and labour employed, and responsibility incurred in the preparation thereof. Any deed which shall fail to take effect under this act shall bind the parties as if the act had not been made. The act is not to extend to Scotland. The forms to be used are very concise, and a lease prepared and executed according thereto may be carried about without the slightest inconvenience.

GAMES AND WAGERS.

THE Act 8 and 9 Victoria, c. 109, "to amend the Laws concerning Games and Wagers," contains several provisions respecting Gaming-houses. In order to remove the difficulties which have arisen on prosecutions, to prove that the house alleged was a common gaming-house, it is now provided, that in the absence of other evidence it shall be sufficient to show that the place is kept open or used for playing therein at any unlawful game, and that a bank is kept there by one or more of the players exclusively of the others, or that the chances of any game played therein are not alike favourable to all the players, including among the players the banker, or other person by whom the game is managed, or against whom the other players stake, play, or bet, and every such house or place shall be deemed a common gaming-house. In places out of the jurisdiction of the metropolitan police, magistrates may issue warrants to officers to enter houses. Persons keeping gaming-houses, and every person having the care or management of the same, as also bankers, croupiers, &c., may now be summarily convicted, and fined £100 or sent to prison for six months, and on non-payment of penalties, a warrant of distress levied on their goods. It shall not be necessary in future to prove that the persons found playing were playing for any money, wager, or stake. The Commissioners of Police may authorise a superintendent and constable to enter gaming-houses, and to seize all instruments of gaming, and to take into custody all persons found therein. Search may be made for instruments of gaming. In proceedings to be instituted after the passing of this act, it shall be sufficient evidence to show that there were cards, dice, balls, counters, tables, or other instruments in the room entered, or on the person seized, although NO play was actually going on at the time, and all such things shall be destroyed. Witnesses examined on gambling transactions are to receive from the magistrates before whom they are called certificates of indemnification. There are also several provisions respecting the regulations to be enforced as to the keeping of billiard and bagatelle tables. Persons keeping inns, ale-houses, and victualling houses are to apply to the justices at licensing sessions to grant licenses at their discretion to keep billiard and bagatelle boards, or instruments used in any game of the like kind. The licenses are to be annual, for which a sum of 6s. on each is to be charged. With regard to places other than those mentioned, and which abound in the metropolis, licenses in Middlesex and Surrey are to be taken out after the 5th of April last, and elsewhere after the 10th of October next, and during the continuance of such licenses the words "Licensed for billiards" shall be conspicuously exhibited. Persons keeping such places without licenses, are to be considered as keepers of common gaming houses, and proceeded against accordingly; and on conviction, in a summary manner, to pay or be committed to prison. Billiards are not to be played "after one o'clock, and before eight of the clock in the morning of any day," nor on Sundays, or other days appointed to be kept as a public fast or thanksgiving. All constables and officers are empowered to enter places where billiards or bagatelle are played as often as they think proper, and on refusal to be admitted the keepers to be deemed guilty of an offence against their licenses. It is also provided by this Act, that every person who shall by any fraud or unlawful device or ill practice in playing at or with cards, dice, tables, or other games, or in bearing a part in the stakes, wagers, or adventures, or in betting on the sides or hands of them that do play, or in wagering on the event of any game, or sport, pastime or exercise, win from any other person to himself or any other or others, any some of money or valuable thing, shall be deemed guilty of obtaining such money or valuable thing from such other person by a false pretence, with intent to cheat or defraud such person of the same; and, being convicted thereof, shall be punished accordingly. Wagers are not to be recoverable by law, but the enactment is not to apply to any subscription, or contribution, or agreement to be awarded to the winner or winners of any lawful game, sport, pastime, or exercise. In future, proceedings under feigned issues are to be abolished, and matters tried under a writ of summons. Proceedings under this act are not to be commenced without a month's notice, and are to be brought within three months of the alleged offence.

SMALL DEBTS ACT.

THE act 8 and 9, Victoria, c. 127, for the better Securing the Payment of Small Debts," gives power to the Courts of Bankruptcy, and a number of inferior courts, on the application of a creditor by a brief note in writing, to issue a summons against any debtor, on balance of account or otherwise, for a sum not exceeding £20; appointing a day in which he is to appear in court. It is not necessary for either party to employ counsel, attorney, or solicitor. The Judge may examine witnesses and documents, and he may also interrogate the parties, and thereupon pronounce a summary judgment. The act empowers him to decide without the intervention of a jury. Where undefined damages are sought, there may be an indirect advantage in saving the Judge from reflections that partisans are sure to make; but in questions of settled accounts, and of bills—in short, in all questions dependent on mere legal skill—the jury is better dispensed with. The Judge may order payment at once, or by instalments; may order execution on the debtor's goods and chattels, tradesmen's tools and other necessaries being excepted; and in the case of a contumacious or fraudulent debtor, imprisonment for a term not exceeding forty days.—Provision is made in the act for extending its benefits to the whole of England. One of the clauses empowers the Queen in Council to enlarge the jurisdiction of all inferior courts for the recovery of debts, to demands whether on account or otherwise, or to damage arising out of any express or implied agreement, not exceeding £20. Such an Order in Council is not to take immediate effect in the case of any court not having a Judge qualified as above desbribed; but it is enacted that the persons entitled to appoint a Judge in such court shall, within three months after the issuing of the order nominate a qualified Judge, or that if they fail to do so, the Queen shall appoint one. The same section of the act empowers the Queen in Council to extend the district of any such court; and where any part of the extended district is within the jurisdiction of another court, to contract its district. The act 8 and 9 Victoria, c. 127, therefore enables the Executive Government to give every part of the country the benefit of local courts, with efficient judges and cheap and expeditious forms of process, for enforcing payment of all debts not exceeding £20. The boon is an important one; as is testified by the eagerness of tradesmen in those Metropolitan districts which are not within the jurisdiction of any court specified in the act, to have them annexed to the district of the nearest court.

THE FINANCES OF GREAT BRITAIN.

FROM an important Parliamentary paper recently published, containing an account of the Public Income and Expenditure of the United Kingdom for the years, 1843, 1844, and 1845, the following facts have been collected.

It appears that the national income has been increasing every year, whilst the concurrent expenditure has remained comparatively stationary. In 1842, the income amounted to £51,120,040, and the expenditure to £55,195,159, showing a deficiency of £4,075,119; in 1843 the income amounted to £56,935,022, and the expenditure to £55,501,740, showing a surplus of £1,433,282; and in 1844, the income of the country amounted to £58,590,217, and the expenditure to £55,103,647, leaving a surplus of £3,486,570, which, together with the former surplus of £1,433,282, formed an aggregate surplus of £5,919,852, which more than covered the large deficiency of £4,075,119 noticed in 1842.

The sources whence our enormous revenue is derived chiefly consist of the following items. We select the component parts of the income received in 1844-45 (£58,590,217). Customs and Excise figure for £38,576,684, the relative proportions of each being £23,000,000, and £15,000,000 in round numbers; Stamps for £7,327,803; Assessed and Land Taxes for £4 429,870; the Property and Income Tax for £5,329,601; the Post-office for £1,705,068; Crown-lands for £441.583; ordinary revenues for £394.598; and Chinese ransom money (an extraordinary and special item), for £385,008.

The expenditure is also divided into a variety of items. In 1844, the cost of collecting the Customs' revenue amounted to a sum of £1,406,486, and with the preventive service charges, amounted to £1,967,584. The expenses of collecting the Stamps and Assessed Taxes amounted to £2,860,536. Thus the mere expense of collecting the revenue amounted to nearly five millions sterling, or about 1-12th.

The civil Government costs the country £1,618,265. This includes a sum of

£371,800, from which the Queen's privy purse is supplied, and the salaries and expenses of the Royal household are defrayed; a sum of £277,000 for allowances to the Royal Family; £26,440 for the Irish viceroyalty; £100,646 for the salaries and expenses of both houses of Parliament, including the printing of the vast mass of papers and documents which now lie accumulated on our tables, the growth of only one session; £538,593 for "civil departments," including superannuation allowances; £277,501 for other annuities; and £6,285 for pensions charged on the civil list. It may be proper to state, for the information of those ignorant of the fact, and especially foreigners, that the Civil List formerly included all the heads of public expenditure, except those of the army, navy, and other military departments, but is confined at present (9th William IV., cap. 25) to "the expenses proper for the maintenance of His Majesty's household." The Queen's privy purse does not exceed, we believe, an annual sum of about £60,000 or £70,000 out of the whole £371,800. Under the expenses of justice is included a sum of £559,782 for courts of justice, £594,312 for police and criminal prosecutions, and £703,111 for houses of correction, &c. The diplomatic expenses amount to £380,609 annually, including £181,186 for the salaries and pensions of foreign Ministers, Plenipotentiaries, and Ambassadors; £129,303 for Consuls' salaries, and superannuation allowances; and £70,120 for expenses of outfits, &c. The above sums are charged on the "Consolidated Fund." Of those raised by annual votes of supply, there are £6,171,714 for the maintenance of the Army, £5,858,219 for that of the Navy, and £1,924,312 for the expenses of the Ordnance.

REVENUE AND TAXATION.

A VOLUMINOUS account, showing the gross receipt of Revenue derived from duties of Customs, Excise, and Stamps, and from assessed taxes; the amount of all taxes repealed, expired, or reduced, and of new taxes imposed; and the increase or decrease of revenue, with the average price of wheat, &c., has been laid before the House of Commons, and affords a complete synopsis of the subject.

It appears that the gross receipt of revenue on the following articles, in the year 1844, amounted:—Customs' duties, to £24,107,348; Excise, to £14,469,336; Stamps, to £7,327,802; and Assessed Taxes, to £3,266,350; total, £49,170,836. The amount of taxes repealed or reduced in the same year was £458,810, no new ones having been imposed. The increase of the actual produce as compared with the preceding year, was £2,297,266; and the average price of wheat, 51s. 4d. In 1842, the amount of the revenue on the same items of taxation amounted to £46,593,802; the amount of taxation repealed or reduced to £1,596,366, and the new taxes imposed to £529,989. The property-tax is not included in this abstract, the order of the house limiting that branch of revenue to the assessed taxes.

The gross total amount of the taxes repealed, expired, or reduced since January, 1815, amounts to the sum of £34,870,795, and the net amount to £32,132,030. Under the head of Customs, the net amount reduced was £10,962,662; under that of Excise, £14,378,400; Stamps, £1,224,038; and Assessed Taxes, £5,557,930. The gross total amount of taxes imposed during the same period amounted to £8,670,067, and the net amount thereof to £8,587,853; viz., £3,894,041 under the head of Customs; £4,169,300 under that of Excise; £209,501 under that of Stamps; and £315,011 under that of Assessed Taxes. It further appears that the grand total estimated gross produce of the Customs' duties repealed between 1815 and 1841 amounted to £9,190,926, and the grand total estimated net produce to £9,005,766; the grand total estimated gross produce of the Customs' duties imposed or augmented during the same period having amounted to £3,746,864, and the net produce to £3,733,219. The estimated loss by the repeal or reduction of Customs' duties amounted, on the net revenue, in 1842, to £1,498,944; in 1833, to £171,521; and in 1844, to £286,431. The concurrent estimated gain, by the imposition or augmentation of duties, amounted in the net revenue to £160,822 (in the year 1842 alone). The gross total amount of stamp duties repealed, expired, or reduced, between 1822 and 1844, amounted to £1,189,997, and the net amount to £1,034,476, whilst the total amount of stamp duties imposed between 1828 and 1844 amounted to £25,321.

The gross produce of the property-tax (repealed in 1816) was £14,617,823, and the net amount £14,318,573. The gross total amount of the assessed taxes repealed or reduced, between 1816 and 1840, was £5,148,574, and the net amount, £4,943,196. The gross total amount of the property-tax, land-tax on personal estates, and assessed taxes, thus repealed, was £19,771,611, and the net total amount £19,266,983.

The total estimated amount of the taxes repealed or reduced in Ireland from 1816 to 1841 amounted to £614,734, including the repeal of the house-tax, reductions in outside jaunting cars, and the rates in respect of windows, carriages, servants, horses, and dogs, and the repeal of the hearth money, window light (£200,000), carriage, servant, dog, horse, and coachmaster duties, &c.

The net amount of the additional duty of £10 per cent. on assessed taxes (imposed by Mr. Baring) was, in 1840 (the first year of its imposition) £311,477.

TRADE AND NAVIGATION.

A PARLIAMENTARY paper has been issued, containing returns relative to Trade and Navigation for the five months, ending June 5, 1845. The whole range of trade is embraced, but we have room for a few articles only. Butter, for instance; in 1843, the quantity imported was 54,604 cwt.; in 1844, the quantity was 69,053 cwt.; in 1845, 93,433 cwt. Cheese has increased in the same proportion. The quantity of wheat imported in 1845 was 71,089 quarters—a very small amount compared with the imports of the preceding two years. Flax also fell off materially. In fruits, the imports increased more than twofold. Silk, skins, spices, rum, and brandy also increased. Sugar imported in 1843 was 1,639,792 cwt.; in 1844, 1,286,470 cwt.; in 1845, 1,926,036 cwt.; and all for home consumption. Tobacco has doubled in the last two years. Wine has also doubled in quantity since 1843, the quantity in 1845 being 2,720,344 gallons. Cotton wool from the British possessions is also on the increase, but foreign has fallen off. Sheep's and lamb's wool has increased from 11,234,621 lb. in 1843, to 18,421,323 lb. in 1845. The exports of coffee from the British possessions in 1843 were 31,246 lb. only; in 1844, 38,802 lb.; in 1845, 263,421 lb. The declared value of exports, coal, cotton manufactures, yarn, cutlery, earthenware, hardware, linens, linen yarn, metals, salt, silk manufactures, refined sugar, sheep's wool, woollen yarn, woollen manufactures, in 1843, was £17,027,190; in 1844, £19,490,719; in 1845, £20,482,579. With regard to shipping, the tonnage entered inwards in the five months ending the 5th of June, 1843, was 1,244,186; in 1844, 1,180,286; in 1845, 1,532,748. Cleared outwards, in the same periods respectively, 1,521,936; 1,412,694; 1,593,008. In the coasting trade the tonnage entered inwards in the same periods was, including the trade with Ireland, 4,174,439; 4,326,334; 5,225,932. Cleared outwards, 4,360,984; 4,507,848; 5,393,419. The number of ships has increased in the ratio of the augmentation of the tonnage.

THE SLAVE TRADE.

A RETURN of the expenses of liberated Africans, and of the liberated African department in each year, from December, 1838, to December, 1844, including buildings and all contingent expenses, so far as the same can be made out from the records of the Audit Office, comprising maintenance, clothing, medical treatment, fuel, light, salaries, and incidental expenses generally, has been appended to some returns and documents relative to the Slave Trade, and the treaties between Great Britain and Spain on that subject, lately obtained by Mr. Hutt, M.P. In 1839 the gross total amount of the above expenses was £21,967; in 1840, £16,257; in 1841, 46,025; in 1842, £33,800; in 1843, 18,802; and in 1844, £13,499; making a grand total of £150,354, for those six years. The total annual cost to the country of all the vessels employed in the suppression of the slave trade, including the wear and tear, amounted in 1839 to £80,393; in 1840, to £101,175; in 1841, to £73,954; in 1842, to £94,026; in 1843, to 88,239; and in 1844, to £217,527; of which £86,091 was consumed in wages, £47,263 in victuals, and £84,173 in wear and tear. The number of men and officers who died in 1844, engaged in the slave service on the coast of Africa, amounted to 66; and the number invalided to 83. It further appears, from this return, that between December, 1838, and December, 1844, there were 346 vessels seized and proceeded against either in the English or foreign mixed commission courts, or in the British Vice-Admiralty courts, on the ground of being concerned in the illicit traffic, and that 66 of them were seized with slaves on board, and 280 under the equipment article, or without slaves. That the net proceeds of the vessels, &c., proceeded against in the mixed courts amount to the sum of £67,412, of which one moiety (£33,706) has been paid over to the foreign Government, and the other moiety (£33,629) to the British captors. That the net proceeds of the vessels proceeded against in British Vice-Admiralty Courts amount to the sum of £33,807, the whole of which proceeds were, by the act 5 and 5 Victoria, cap. 91, granted to the captors. That the net proceeds of the vessels, &c., condemned for a breach of the act 5 George IV., cap. 113, amount to the sum of £6,518, which was distributed thus:—£1,911 to captors for seizures at sea; £898 to captors where the vessels were not seized at sea; £898 to the governor of the colony where the seizure was made; and £2,810 to the Crown, being the proportion thereto appertaining. That the sums paid for bounties to the captors on the slaves seized amounted to £88,135; the tonnage bounties to the captors for the same period to £114,668; and the compensation paid by her Majesty's Government for illegal captures, during the same period to £1,405 The expenses of the mixed commission courts amounted in the year 1839 to the sum of £15,088; in the year 1840, to £15,581; in 1841, to £14,803; in 1842, to £13,880; in 1843, to £21,787; and in 1844, to £21,757. Various treaties in the French, Portuguese, and Spanish languages, with translations annexed, are given in the return.

MERCHANT SEAMEN.

THE Lords Commissioners of her Majesty's Treasury having had under their consideration a representation of the Commissioners of the Customs, relative to the evasion of the clause in the Merchant Seamen's Act, requiring merchant vessels to take on board and have in store certain quantities and descriptions of medicines, and their Lordships having communicated to the Lords Commissioners of the Admiralty on the subject, have approved of the suggestion of the Board, that vessels required to carry medicines by the act 7 and 8 Victoria, chap. 112, are to be occasionally boarded or visited by the revenue officers for the purpose of ascertaining the quantities of medicines, &c., shipped for the use of the crew; and directions have been issued to the principal officers of the revenue at the several ports of the United Kingdom, and other places traded to by British vessels, to take care that their Lordships' orders are duly carried into effect from the present time. The 18th section of the act alluded to directs that every ship navigating between the United Kingdom, and any place out of the same, shall have and keep constantly on board a sufficient supply of medicines and medicaments suitable to accidents and diseases arising on sea voyages, in accordance with the scale which shall, from time to time, or at any time, be issued by the Admiralty; and every ship (except those bound to European ports, or to ports in the Mediterranean Sea) is also to have on board a sufficient quantity of lime or lemon-juice, sugar, and vinegar, the same being served out to the crew whenever they shall have been consuming salt provisions for ten days: the lime or lemon-juice and sugar daily, after the rate of half an ounce each per day, and the vinegar weekly, at the rate of half-a-pint per week to each person, so long as the consumption of salt provisions is continued; and in case of default in keeping the articles mentioned in store, the owner of the vessel incurs a penalty in each instance of £20; and in default of serving them out as stated, a penalty in each instance of £5; and in case the master or any seaman receives any hurt or injury in the service of the ship, the expense of providing the necessary surgical and medical advice, with attendance and medicines, and for his subsistence until cured or brought back to some port of the United Kingdom, is, together with the costs of his conveyance home, to be defrayed by the owner of the ship, without any deduction whatever on that account from the wages of the master or seaman.

PAY OF ARMY OFFICERS.

BY a revised warrant of her Majesty, issued in the summer of 1845, regulating the issues of staff and garrison pay, the following are the prescribed rates of Daily Pay allowed for Staff-officers at home and abroad, who hold other military commissions or appointments:—General commanding in chief, if a field-marshal, £16 8s. 9d.; if below that rank, £9 9s. 6d.; general, £5 13s. 9d.; lieutenant-general, £3 15s. 10d.; major-general, £1 17s. 11d.; brigadier-general, £1 8s. 6d.; colonel, £1 2s. 9d.; adjutant-general, if serving at head-quarters, besides allowance of £500 a-year, £3 15s. 10d., if serving elsewhere, £1 17s. 11d.; deputy adjutant-general, if serving at head-quarters, £1 17s. 11d., if serving elsewhere, 19s.; assistant-adjutant-general, if at head-quarters, half-pay regimental rank, 19s.; head-quarters, full-pay, ditto, 14s. 3d., if serving elsewhere, 14s. 3d.; deputy-assistant, ditto, head-quarters, 14s. 3d., if serving elsewhere, 9s. 6d.; quarter-master-general, head-quarters, besides allowance of £500 a-year, £3 15s. 10d., if serving elsewhere, £1 17s. 11d.; deputy quarter-master-general, head-quarters, £1 17s. 11d., elsewhere, 19s.; assistant quarter-master-general, sums varying from £1 7s. 6d. down to 14s. 3d.; deputy, ditto, 14s. 3d. down to 9s. 6d.; military secretary abroad, 19s; assistant ditto, 9s. 6d; aide-de-camp to Sovereign, 10s. 5d.; to general officer, 9s. 6d.; major of brigade, 9s. 6d. Daily rates of pay for staff or garrison officers holding only one military commission or appointment:—Inspector-general of hospitals, under 20 years' service, full pay £1 16s.; under 25, £1 18s.; above 25, £2. Deputy inspector-general, under 20 years' service, £1 4s.; above 20 and under 25, £1 8s.; above 25, £1 10s. Staff surgeon, first class, under 20 years' service, 19s.; under 25, £1 2s.; above 25, £1 4s.: staff surgeon, second class, under 10 years' service, 13s.; under 20, 15s.; under 25, 19s.; above 25, £1 2s. Assistant-surgeon, under 10 years' service, 7s. 6d.; above 10, 10s. Medical clerk, under 15 years' service, 6s.; abroad, 7s.; under 20, 7s.; abroad, 8s.; under 25, 8s.; abroad, 9s.; above 20 years, of which 15 have been abroad, 9s.; above 25, of which less than 15 abroad, 9s. In addition to pay of ranks, officers at head of medical department on foreign stations to receive allowances as under when serving under the following circumstances:—if with army in the field of 10,000 men or upwards, 20s. per day; if with 5,000, 15s. per day; if less number, 10s. per day; and if in colony whose forces consist of 1,500 men, 5s. per day. Chaplain to forces, under 15 years' service, full pay, 16s.; under 20 years' service, £1; above 20, £1 2s. 6d. Deputy judge-advocate, 19s.; provost-marshal, 9s. 6d.; deputy provost-marshal, 4s. 9d.

USEFUL DOMESTIC HINTS AND RECEIPTS.

THE POTATO DISEASE.

Mr. Herapath has widely circulated the following valuable information:—My attention has been given to the disease which has shown itself so extensively amongst the growing potatoes. I find, in almost every instance, that the epidermis of the stalk below the surface of the ground, is more or less in a state of decay, often disintegrated, and completely rotten; the leaves and branches accord with the state of that part of the stalk below the ground. The tuber, beneath the outer skin, is first spotted brown (like a bruised apple): these spots extend and penetrate towards the centre, quite changing the nature of the potato. Those near the surface are most injured; in some cases the lowest on the root are not at all affected, while the upper ones are useless. I should therefore expect that the longer the crop remains in the land, the greater the injury will be. It seems, from the microscopic appearances, that the starch escapes injury for a long time after the skin and cellular parts are gone; and as the whole of the nutritive powers of the potato reside in the starch, I should recommend that wherever the disease has shown itself to any extent the crop should be dug whether ripe or not, and the starch extracted by the following simple process:—After washing the roots, let them be rasped fine and thrown into a large tub or other vessel; pour a considerable quantity of water, and well agitate and rub the pulp with the hands; all the starch or fecula will, from its great weight, fall to the bottom, while the skin and fibrous matter will be carried away by the water; wash the starch with one or two more waters, allowing it to fall after each washing; spread it upon cloths in a warm room to dry; in this way about twenty or twenty-one pounds will be obtained from every hundred pounds of potatoes, and it contains as much nourishment as the original roots; it will keep any length of time, and might be used with flour to make bread, pies, puddings, &c., as well as farinaceous spoon-meat. This is much better than throwing away the diseased roots, and will furnish food for tens of thousands who might otherwise want it.

CURING BACON.

The following is the method of curing bacon in Yorkshire:—After being killed it is allowed to hang twenty-four hours previous to being cut up; then rub one pound of saltpetre on a twenty stone pig (of fourteen pounds to the stone), and one and a half or two stones of common salt, taking care that it is well rubbed in; it is then laid in a tub kept for the purpose. After having laid a fortnight, it is turned over, and a little more salt applied, say half a stone; it then remains a fortnight longer in the pickle-tub; it is then taken and hung up in the kitchen, where it remains two months to dry, but should the winter be far advanced, and dry weather set in, a shorter period might suffice; after being taken from the top of the kitchen, the inside is washed over with quicklime and water to preserve it from the fly; it is then removed into a room not used by the family, away from heat, and where it will be kept perfectly dry, and is ready for use at pleasure. The smoking system is not generally adopted in York. The above plan never fails, if done with care; the saltpetre and salt should be of the best quality, for upon those articles depend the success in producing a good article for the table. The whitewash not only preserves it from the fly, but also prevents it from being rancid, as it would otherwise be.

GEESE.

The common Goose begins to lay towards Candlemas, and after laying from nine to eleven eggs, she sets thirty days, and then brings out her little flock. If, however, she shows a wish to set when she has only laid two or three eggs, she must be driven from the nest, or shut up for a day or two. She will then take to lay again. One gander and five geese are the regular stock to begin with: they will produce fifty goslings in a season. Geese are grazing birds; they love a common, but horses do not like their company in a field, as they object to feed after them. The herb called goose-grass they are immoderately fond of, and it is plentiful always under hedges during the gosling season. Water is important to geese, but they succeed in situations where there is no pond: a large shallow pan filled with water, sufficiently capacious to admit of their washing in it, has often answered the purpose; but a pool is most desirable. The goose-hovel should be low, well-thatched, and not facing into the farm-yard, otherwise pigs will get through the goose aperture. It should have a door also, for the owner to enter. The nests should be composed of straw, lined with hay, and the birds should be fed near their home to allure them to it. If some of the goslings are hatched before the others, they should be removed from the mother, kept warm in flannel before the fire, and returned to her when the whole brood are hatched. Thin barley meal and water is excellent food for goslings, with chopped goose-grass; they soon learn to eat oats and feed themselves. Mow down hemlock, if any grows near the poultry yard: it is pernicious in its effects upon poultry. Fatten geese in small parties, as they love society. They should be cooped a month, fed plentifully with sweet oats and clean pure water in a narrow wooden trough. An experiment has lately been tried of feeding geese with turnips, cut up very fine, and put into a trough with water. The effect was, that six geese, weighing only nine pounds each when shut up, actually weighed twenty pounds each, after about three weeks' feeding with this food alone.—*Farmer's Encyclopædia.*

TO FATTEN POULTRY.

The following will be found a quick and excellent food for fattening chickens. Set rice over the fire, with skimmed milk; let it boil till the rice is quite swelled out, then add a teaspoonful of sugar. Feed them three times a day in common pans, giving them only as much as will quite fill them at once. Let the pans be well washed, and set in clean spring water, that no sourness may be conveyed to the fowls, as that prevents them from fattening. Give them clean water or the milk of rice to drink. By this method, the flesh will have a clear whiteness, which no other food gives; and when it is considered how far a pound of rice will go, and how much time is saved by this mode, it will be found to be cheap. It is said that a portion of animal mixed with vegetable food, causes poultry to thrive rapidly, but they should be confined to a vegetable diet some time before they are killed. A quantity of charcoal, broken in small pieces, and placed within reach of the poultry, increases their appetite, and promotes digestion.

TO KEEP RABBITS FROM BARKING TREES.

In order to keep fruit trees safe from these depredators take one spoonful of hot slacked lime, one ditto of clean cow's dung, half ditto soot, one handful of flour of sulphur, and mix all together with soft water or cow's urine, until they acquire the consistency of thick paint; then paint the trees sufficiently high to be out of the reach of these vermin. The trees should be gone over in the beginning of winter, or on the first appearance of frost, choosing a dry day, if possible, for the operation. The sulphur and soot, I presume, are the principal ingredients. The cow dung is added merely to make the others stick to the trees. I have not tried sulphur matches, as recommended, but I have no doubt of their efficacy. With the above mixtures I have protected numbers of laburnums, near the sides of walks, for sixteen years, with the greatest success, where there are multitudes of hares, and rabbits also frequently make their appearance. Except when the mixture has been washed off by heavy rains before being properly dry, one application has served for a whole year.—*Gardeners' Chron.*

TO DRESS WHITEBAIT.

(Greenwich Receipt.) In season in July, August, and September.

This delicate little fish requires great care to dress it well. Do not touch it with the hands, but throw it from your dish or basket into a cloth, with three or four handsful of flour, and shake it well; then put it into a bait sieve, to separate it from the superfluous flour. Have ready a very deep frying-pan, nearly full of boiling fat, throw in the fish, which will be done in an instant: they must not be allowed to take any colour, for if browned they are spoiled. Lift them out, and dish them upon a silver or earthenware drainer, without a napkin, piling them very high in the centre. Send them to table with a cut lemon, and slices of brown bread and butter on a plate.—*From Modern Cookery, by Eliza Acton;* an excellent work.

HER MAJESTY'S PUDDING.

Infuse in a pint of new milk half a pod of vanilla, cut into short lengths, and bruised; simmer them gently together for twenty minutes, and strain the milk through muslin to half a pint of cream; put these again on the fire in a clean saucepan, with three ounces of fine sugar, and pour them, when they boil, to the beaten yolks of eight very fresh eggs. Stir the mixture often until it is nearly or quite cold, and boil it as gently as possible for an hour in a well-buttered mould or basin that will just hold it. Let it stand for four minutes at least before it is turned out; dish it carefully, strew, and garnish it thickly with branches of preserved barberries, or send it to table with a rich syrup of fresh fruit, or with clear fruit-jelly, melted. We have had often a compote of currants, cherries, or plums served, and greatly relished with this pudding, which we can recommend to our readers as an extremely delicate one. The flavouring may be varied with bitter almonds, lemon-rind, noyeau, or aught else which may be better liked than the vanilla. New milk, one pint; vanilla, half pod: twenty minutes. Cream, half-pint; sugar three ounces; yolks of eggs, eight: one hour. The cook must be reminded that unless the eggs be stirred briskly as the boiling milk is gradually poured to them, they will be likely to curdle. A buttered paper should always be put over the basin before the cloth is tied on, for all custard puddings.—*Ibid.*

PRINCE ALBERT'S PUDDING.

Beat to a cream half a pound of fresh butter, and mix with it by degrees an equal weight of pounded loaf-sugar, dried and sifted; add to these, after they have been well beaten together, first the yolks, and then the whites of five fresh eggs, which have been thoroughly whisked apart; now strew lightly in, half a pound of the finest flour, dried and sifted, and last of all, half a pound of jar raisins, weighed after they are stoned. Put these ingredients, perfectly mixed, into a well-buttered mould, or floured cloth, and boil the pudding for three hours. Serve it with punch sauce. We recommend a little pounded mace, or the grated rind of a small lemon, to vary the flavour of this excellent pudding; and that when a mould is used, slices of candied peel should be laid rather thickly over it after it is buttered. Fresh butter, pounded sugar, flour, stoned raisins, each half a pound; eggs, five: three hours.—*Ibid.*

TO MULL WINE.

(An excellent French Receipt.)

Boil in a wineglassful and a half of water a quarter of an ounce of spice (cinnamon, ginger slightly bruised, and cloves), with three ounces of fine sugar, until they form a thick syrup, which must not on any account be allowed to burn. Pour in a pint of port wine, and stir it gently until it is on the point of boiling only: it should then be served immediately. The addition of a strip or two of orange-rind cut extremely thin, gives to this beverage the flavour of bishop. In France light claret takes the place of port wine in making it, and the better kinds of *vin du pays* are very palatable thus prepared. Water, one and a half wineglassful; spice, quarter of an ounce, of which fine cloves, twenty-four, and of remainder, rather more ginger than cinnamon; sugar three ounces: fifteen to twenty minutes. Port wine or claret, one pint; orange-rind, if used, to be boiled with the spice. Sherry, or very fine raisin or ginger wine, prepared as above, and stirred hot to the yolks of four fresh eggs, will be found excellent.

MINT JULEP.

(An American Receipt.)

Strip the tender leaves of mint into a tumbler, and add to them as much wine, brandy, or any other spirit, as you wish to take. Put some pounded ice into a second tumbler; pour this on the mint and brandy, and continue to pour the mixture from one tumbler to the other until the whole is sufficiently impregnated with the flavour of the mint, which is extracted by the particles of the ice coming into brisk contact when changed from one vessel to the other. Now place the glass in a larger one, containing pounded ice: on taking it out of which it will be covered with frost-work.

"GREAT FACTS" FOR "LITTLE FOLKS."

The "United Association of Journeymen Confectioners," whose confederation includes Edinburgh, Glasgow, Aberdeen, Arbroath, Leith, Perth, Dundee, and St. Andrew's, having come to a resolution to "put down" adulteration, have published a statement to the effect that a substance called "mineral white" (which is simply plaster of Paris or stucco) is largely used in the manufacture of sweetmeats. Here is the abominable receipt for adulterated lozenges:—12lb. of plaster of Paris! 12lb. of starch! 12lb of sugar. A grandchild, and domestic, of a gentleman in Clare, who had partaken of some confectionary and brideeake at a nuptial party, were seized with dangerous illness soon after, and but for the skilful remedies quickly applied, the lives of both, in all probability, would have been forfeited. On inquiry, it was ascertained that many articles of confectionary prepared for festive occasions are strongly impregnated with poisonous ingredients, especially in the exterior ornamental parts of these *bon bons.*

DEATH FROM EATING MUSHROOMS.

Last autumn, five persons were poisoned at Paris, from eating funguses gathered by one of the party in the Bois de Boulogne, and supposed by him to be mushrooms. An inquest was lately held at Ipswich, to inquire into the circumstances connected with the death of Mr. John Carr, of that town, who, according to the evidence of Mr. Bullen, surgeon, died from eating mushrooms. It appears that mushrooms were grilled (not stewed or boiled) for dinner: one of them was a very large one, very black underneath, and in fact only fit for making catsup. The whole of this large one was eaten by the deceased, and part of the smaller one also. The son partook of a part of the smaller one. It was a real mushroom; "but," said the surgeon, "it should be understood that all fungous matter is really poisonous at some parts of their growth." By grilling the mushrooms, the poisonous matter remained in them, and the deceased having no teeth he swallowed it without masticating it. He was perfectly narcotised for hours. Mushrooms are of a narcotic and acrid nature. Deceased was perfectly senseless and powerless from the moment he was taken ill. There were no symptoms of apoplexy; in fact they were the very reverse. His pulse was about fifty-six, and showed that he was under the influence of some strong poison. It is extremely important that the public should take this as a warning in the use of mushrooms; they are at all times indigestible, but they should never be taken when the underneath part is black, but only when they are of a light colour.

BIELA'S COMET.

On February 28th, 1826, a Comet was discovered by M. Biela, an Austrian officer, and which proved to be one of short period. The time of describing its orbit, is about 6¾ years; it was observed in 1832, again in 1839, and from calculations of the observed phenomena, it is predicted to return, and be the nearest to the Sun on February 11th, 1846. The following ephemeris is formed from that of Del Cav. Giovanni Santini, Director of the Observatory of Padua, and which extends from 1845, November 23rd., to 1846, May 6th, and to which we refer those of our readers who may wish to know more particulars of it than is stated below

1846. Month and Day.	At Midnight. Right Ascension of the Comet.	At Midnight. Declination of the Comet.	Greenwich Mean Time of the Comet. Southing or passing the Meridian.	Greenwich Mean Time of the Comet. Setting.	Point of the Horizon where the Comet sets.	Distance of the Comet in Millions of Miles from The Sun.	Distance of the Comet in Millions of Miles from The Earth.
	H M.	° ′	H. M.	H. M.			
January 2	23 26	0 13 N	4 39 P.M.	10 44 P.M.	little N. of W.	101⅔	81¾
.. 6	23 36	0 1 S	4 33	10 37	W.	97⅓	79⅔
.. 10	23 47	0 14	4 28	10 30	W.	94	77⅔
.. 14	23 58	0 28	4 24	10 24	W.	91⅓	75
.. 18	0 10	0 42	4 20	10 19	little S. of W.	89	72⅓
.. 22	0 23	0 58	4 17	10 14	.	86⅔	69⅔
.. 26	0 37	1 19	4 15	10 11	..	84⅓	66⅔
.. 30	0 51	1 43	4 14	10 7	..	831	63⅔
February 3	1 6	2 13	4 13	10 4	..	82¼	60⅔
.. 7	1 22	2 48	4 13	10 3	..	81¼	57⅔
.. 11	1 40	3 30	4 15	10 1	near W. by S.	81⅓	54⅓
.. 15	1 58	4 19	4 18	10 0	..	81⅔	51⅓
.. 19	2 18	5 17	4 22	9 58	..	82¼	48⅓
.. 23	2 40	6 20	4 28	9 59	..	83¼	45⅓
.. 27	3 3	7 31	4 35	10 1	W. by S.	85	43
March 3	3 29	8 45	4 45	10 5	..	86⅔	40⅓
.. 7	3 57	10 1	4 58	10 11	near E.S.E.	89⅓	38⅔
.. 11	4 27	11 14	5 12	10 18	..	91⅔	37⅓
.. 15	4 59	12 20	5 28	10 28	..	94⅓	36
.. 19	5 33	13 12	5 46	10 40	..	97¾	35⅓
.. 23	6 7	13 49	6 5	10 58	E.S.E.	101	35⅓
.. 27	6 41	14 8	6 25	11 15	..	104⅓	36⅓
.. 31	7 15	14 7 S	6 41 P.M.	11 31 P.M.	..	105⅓	38

From the above it will be seen that the Comet will approach the Sun till about February 11th, at which time it will be a little more than 81 millions of miles distant from him; after that time it will move from the Sun. It will, however, continue to approach the Earth, till near the end of March, at which time it will be the nearest to the Earth, being then about thirty five millions of miles distant; after this time it will recede from the Earth. At the appearance of this Comet, in 1832, Sir John Herschel, in a communication made by him to the Royal Astronomical Society, on the 9th of November, 1832, stated that on the evening of the 23rd of September previous, he saw a whole cluster of stars of the *sixteenth* magnitude, almost through the very centre of Biela's Comet. There is no prospect of this Comet being seen except through a telescope. The best times to look for it will be, in January, between half-past five o'clock and seven o'clock; in February, between 6h. and 8h.; and in March, between 7h. and 8h. in the evenings.

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MISCELLANEOUS.